EX·LIBRIS·COLL·MED·PHILAD·INSTIT·A·D·MDCCLXXXVII·
NON SIBI SED TOTI

Class_____ No._____

Presented by

Exchange.

Bdg.2.55

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA

Digitized by the Internet Archive
in 2016

https://archive.org/details/westvirginiamedi4519west

Vol. 45
No. 1
JANUARY, 1949
Per Year, $3.50
Single Copy, 50 Cents

THE WEST VIRGINIA Medical Journal

COLLEGE OF PHYSICIANS
LIBRARY
JAN 10 1949
PHILADELPHIA

CONTENTS

An Evaluation of Antiseptic Drugs and Antibiotics in the Treatment of Infections of the Urinary Tract
By Austin I. Dodson, M. D.

Cancer of the Breast
By T. P. Mantz, M. D., Everett Squire, M. D., J. Ross Hunter, M. D., and Walter Putschar, M. D.

Pediatric Ophthalmology
By Melvin W. McGehee, M. D.

Boxing and Intrachanial Injuries
By Joseph D. Romino, M. D.

Published Monthly By
THE WEST VIRGINIA STATE MEDICAL ASSOCIATION
Box 1031 (302 Atlas Bldg.), Charleston 24, W. Va.

Entered as second-class matter January 1, 1926, at the post office at Charlestan, West Virginia, under the act of March 3, 1879.

QUALITY BEGINS WITH CRUDE MATERIALS

All crude materials received at the Lilly Laboratories, from whatever source, must meet exacting specifications before acceptance. First they are inspected macroscopically, and representative samples are taken for detailed analysis. Only after issue of a clean "bill of health" from the botanist or chemist are crude drugs placed in stock to await manufacturing orders.

Lilly

QUALITY
RESEARCH
ETHICS

ELI LILLY AND COMPANY, INDIANAPOLIS 6, INDIANA, U. S. A.

criteria in syphilotherapy

MAPHARSEN

PARKE, DAVI

THE WEST VIRGINIA MEDICAL JOURNAL

302 ATLAS BUILDING, CHARLESTON, W. VA.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Editor
WALTER E. VEST, M. D.
955 Fourth Ave.
Huntington, W. Va.

Managing Editor and
Business Manager
MR. CHARLES LIVELY
Box 1031
Charleston 24, W. Va.

Associate Editors:
EDWARD J. VAN LIERE, M. D.
Morgantown, W. Va.
W. M. SHEPPE, M. D.
Wheeling, W. Va.
G. G. IRWIN, M. D.
Charleston, W. Va.
R. H. EDWARDS, M. D.
Welch, W. Va.

JAMES R. BLOSS, M. D., Editor Emeritus, Huntington

Vol. XLV JANUARY, 1949 No. 1

AN EVALUATION OF ANTISEPTIC DRUGS AND ANTIBIOTICS IN THE TREATMENT OF INFECTIONS OF THE URINARY TRACT*

By AUSTIN I. DODSON, M. D.,
Richmond, Virginia.

The important and interesting aspects of chemical and antibiotic preparations used to combat urinary tract infections are too numerous to be adequately discussed in this paper. I shall, therefore, confine myself to a brief review of a few representative contributions to the subject.

During the past decade tremendous progress has been made in the development of these remedies. Early reports attributed magic powers to some of them and the enthusiastic reception accorded each new drug is familiar to all of us. Unfortunately, as time passed and the "wonder drugs" were used more extensively, it became evident that the panacea for all bacterial infections was yet to be found. The germicidal powers manifest in the test tube could not always be obtained in the patient. In the laboratory a constant temperature and a desired pH level could be constantly maintained and a known concentration of the germicide could be brought in contact with a definite number of bacteria of a known strain.

In the patient these factors are often variable and, furthermore, there are other antagonistic factors such as necrotic tissue, foreign bodies, poor drainage, multiple strains of organisms and diminished renal function. Then again, certain toxic manifestations become evident. These toxic complications occurred not only when the drugs were used in excess and in poorly selected cases but also in patients carefully selected and well controlled.

As we review the situation regarding chemotherapy and antibiotic therapy we observe that the picture has changed from year to year—first, over-enthusiastic approval followed by a more cautious attitude in which the more nearly true value of the individual preparations is recognized.

In this passing parade of facts and figures the chemists and other research workers have rendered valuable service to the clinician and to his patients. There have been constant and, to a great extent, successful efforts to produce more efficient anl less toxic antiseptics and to evaluate the germicidal possibilities and limitations of those in use. It would be too time consuming to attempt to call attention to the numerous contributions that have been made to this subject. The fact that most investigators are substantially in agreement attests to the therapeutic value of these drugs.

Hexamethylenamine (methenamine, urotropin), although far less effective than the more recently developed urinary antiseptics, is still quite widely used. It was first introduced by Nicolarer in 1890. Bactericidal effect is dependent upon the elimination of formaldehyde in strongly acid urine. Hinman, in 1913, showed that methenamine in 15 grain doses three times a day would produce antiseptic bladder urine in 30 per cent of cases. Thomas and Wang demonstrated that formaldehyde would inhibit the growth of staphylococci in 1:20,000 dilution and the colon bacilli in 1:1,500 dilution; both were

*Presented before the 81st annual meeting of The West Virginia State Medical Association, at Huntington, May 12, 1948.

MAR 25 1950

destroyed in dilution of 1:5,000. He found that formaldehyde appeared in the urine thirty minutes after the administration of 15 grains of methenamine and that the urine became bacteriostatic in 15 per cent of sixty urine specimens examined when 15 grains were given three times a day. High concentration of formaldehyde was, as a rule, detected in urine specimens in which pH values were between 4.55 and 5/65. Formaldehyde was not eliminated when the urine was alkaline. The dose administered by Thomas and Wang was slightly more than half that which can be tolerated by the average individual. Twenty grains four time a day usually can be administered for four or five days before there is evidence of irritation. Burning and frequently of urination and red blood cells in the urine are indications for a rest period or to switch to some other antiseptic.

Acriflavine, serenium, pyridium and hexylresorcinol each enjoyed brief popularity as urinary antiseptics. It is my belief that both hexylresorcinol and pyridium exert some analgesic effect upon the inflamed bladder mucosa; however, the bactericidal effect of these drugs is not very impressive.

Mandelic acid is now universally recognized as a useful chemotherapeutic agent in the treatment of urinary tract infections. Schatten, in 1883, determined that the drug, when fed to dogs, could be almost entirely recovered from the urine, yet its bactericidal value was recognized only when Rosenheim, searching for a drug (similar to beta-hydroxybutyric acid) which, when given by mouth, would resist oxidation and be eliminated in the urine, discovered the therapeutic usefulness of mandelic acid. He found that it could be recovered unchanged in the urine and, in sufficient dosage, would kill bacteria provided the urine was highly acid. Beta-hydroxybutyric acid had been proved by Fuller to be responsible for the bactericidal effect of the ketogenic diet but, unfortunately, in addition to being difficult to obtain, when given by mouth it is completely oxidized in the body.

By laboratory tests Carroll, Lewis and Kappel found that mandelic acid in .19 to 1 per cent solution in urine with an acidity of pH 5.5 or less was definitely bactericidal to the majority of pathogenic bacteria usually found in the urine. The more acid the urine the lower the concentration of the drug required. Urine of pH 4.5 would itself destroy most organisms. In their experiments, Escherichia coli and Bacillus proteus were the most easily killed. Streptococci required a more concentrated solution, while Aerobacter aerogenes and Pseudomonas pyocyanea were even more resistant. Clinically, B. proteus has such an alkalinizing effect on the urine that mandelic acid is not effective. When treating patients, these workers found the drug helpful in eradicating the colon bacillus (Escherichia) but decidedly less effective when the infection was caused by other organisms. Edward N. Cook found that the cocci were, as a rule, not affected by mandelic acid except the Streptococcus fecalis, which was usually eradicated by its use. The dose is 12 Gm. of the acid daily. It may be administered as a syrup, as an elixir or as calcium mandelate.

Dodson and Oden reported the results of mandelic acid therapy in 42 patients. They concluded that mandelic acid is a safe drug in the necessary dosage and that when acidity of the urine is maintained at or below pH 5.2 it is very effective in combating infections of the urinary tract. It is more effective when Esch. coli is the sole infecting organism and, like all urinary antiseptics, its usefulness is handicapped by poor kidney function and obstructive lesions.

I continue to find mandelic acid very useful in chronic infections of the urinary tract and use it rather extensively, particularly in office practice. It is almost entirely free from toxic effects. Occasionally after prolonged administration a few hyaline casts and red blood cells may appear in the urine but disappear promptly when the drug is discontinued. Occasionally the drug is nauseating and must be discontinued for this reason. An elixir usually is administered one-half once four times a day. It is not effective when renal function is poor nor when the urine cannot be kept acid.

Methenamine mandelate mandelamine is formed by the union of mandelic acid and methenamine. Helmholz and Alford observed a favorable in vitro effect of this compound on several strains of Esch. coli. Excellent clinical results have been reported by Kirwin and Bridges and by Carroll and Allen. The drug is more effective in the treatment of Esch. coli infections. As is the case with mandelic acid and methenamine, a highly acid urine is desirable.

No group of drugs has given greater promise as urinary antiseptics or more nearly fulfilled that promise than the sulfonamides. The early predictions as to their usefullness have been considerably modified but when properly administered in properly selected cases the results rarely are disappointing. The pharmacologic action of all of these drugs is similar, with only slight individual variations. All form active and

inactive or conjugated forms in the blood and urine. Sulfapyridine and sulfathiazole are believed to precipitate in the renal tubules and pelvises more frequently than the other members of the group but sulfadiazine crystalluria and anuria occasionally are reported. Crystals and other toxic manifestations are more apt to occur when large doses of the drug are given and when fluids are restricted. Therefore, high blood and urinary concentrations are not without danger. A free fluid intake and the administration of alkalies are helpful in preventing renal complications. The large doses administered in other branches of medicine are rarely prescribed for urinary tract infections and it is noteworthy that few renal complications have been reported in patients treated for infections of the urinary tract. The few exceptions that I have seen were patients treated for gonococcal infection in the early days of sulfathiazole. These drugs are excreted principally through the kidneys; therefore, it is necessary to have a knowledge of the patient's renal function. Dangerously high blood levels will occur in patients with reduced renal function unless the dosage is regulated accordingly.

Nausea, headache, dizziness and fever are the most frequent toxic manifestations. They are occasionally sufficiently severe to require discontinuance of the drug. Skin rash, episcleritis and conjunctivitis occur more frequently with sulfathiazole. Sulfadiazine and sulfacetamide are the most easily tolerated.

While all of the sulfonamides are bactericidal to some extent for most bacteria, individual numbers of the group have a higher therapeutic index for a particular bacterium. Alyea found that sulfathiazole was particularly bactericidal for Staphylococci while sulfadiazine was of greatest use in the treatment of infections caused by Pneumococci and Friedlander's bacilli.

La Towsky reported a series of 100 patients treated with sulfadiazine for nonspecific urinary tract infections. There was a favorable response in 75 per cent in that the patient became free of symptoms and the urine macroscopically clear but bacteria were completely eliminated in only 12 patients. All species of pathogens encountered responded to sulfadiazine in greater or lesser degree. The dosages were from 2 to 4 Gm. per day and the blood levels ranged for the free form of sulfadiazine from 3.2 to 17.9 mg. per 100 cc., most of them being in the range from 6 to 10 mg. per 100 cc. Urine levels with this dosage ranged for the free form of sulfadiazine from 40 to 170 mg. per 100 cc. A fluid intake of 3,000 cc. or more was maintained. The urinary pH was maintained on the acid side and there were no calculi of sulfadiazine produced. He reported three patients from other services who received from 6 to 8 Gm. of sulfadiazine per day with a fluid intake of no more than 1,500 cc. per day in whom stones of sulfadiazine developed. Alyea has also called attention to the importance of a free fluid intake when sulfonamides are administered. He also advises the administration of alkalies.

Sulfathiazole introduced in 1939 was soon acclaimed as almost a specific in the treatment of gonococcal infections. Alyea found it to be effective against Staphylococcus and Proteus in a high urinary pH and more active against Streptococcus fecalis in a low pH. He found it effective against the Staphylococcus in 88.2 per cent of cases and against the colon bacillus in 79 percent, while in mixed infections only 50 per cent of the cases responded. Carroll, Kappel and Lewis found sulfathiazole an effective and safe drug in the treatment of staphylococcic infections. They reported complete cures in 22 of 25 patients treated.

Young, Hill, Jewett and Satterthwaite found that in vitro studies the results with sulfacetamide generally were more striking than with parallel concentrations of sulfanilamide in cases of S. aureus, Str. fecalis, Esch, coli, Aerobacter and Proteus. In 15 cases of urinary tract infection (Esch. coli, Aerobacter and mixed infection including Proteus) sterile urine cultures were obtained in seven instances. Of 25 cases of gonorrhea, fifteen were cured. The dose administered was 4 Gm. daily. Alkalies were not administered. Mild toxic reactions occurred in six cases and there was a moderate drop in hemoglobin in 8 of 26 cases in which frequent blood counts were made. A moderate transitory drop in carbon dioxide combining power occurred in almost every case. All toxic manifestations subsided promptly when the drug was discontinued.

Prentis and Kanealy reported the results of sulfacetamide therapy in 135 cases. The average dose administered was 4.89 Gm. The results were somewhat similar to those reported by Young and his colleagues. The best results (68.4 per cent cures were obtained in Esch. coli infections and the poorest results (14 per cent cures) in infections caused by Staphylococci.

Lehr, in an experimental study of the toxicity and efficiency of sulfacetamide in the treatment of bacillary infections of the urinary tract, concluded that sulfacetamide deserves preference over other sulfonamides now in use. He found that sulfacetamide compared favorably with other

members of the group in bactericidal activity, that there was rapid renal elimination, therefore comparatively low tissue concentration in the presence of high urine levels and that the drug was highly soluble even in the physiologic acid range of the urine.

Everett, Vosberg and Davis have reported the use of sulfathalidine in the treatment of Esch. coli infections with excellent results. Urines with other types of organisms commonly found in the urinary tract were never rendered sterile although some of them, especially those with A. aerogenes infection, were often greatly improved symptomatically. The drug is tolerated well in patients who have reacted badly to other sulfonamides.

Sufficient time has not elapsed since the introduction of penicillin and streptomycin to adequately appraise their therapeutic usefullness in the treatment of infections of the urinary tract. Experience seems to indicate that both are more limited in their scope of usefulness than are the sulfonamides. Penicillin, according to Mark Exley who reported its use in 101 cases, does not inhibit the growth of B. coli, B. proteus, or B. pyocyaneus. Cure was obtained in 78.2 per cent of pyogenic cocci. His best results were obtained with a daily dosage of from 200,000 to 350,000 Oxford units for a period of three to six days. Staphylococci were somewhat more resistant than Streptococci. Alyea and Parrish recommended the use of penicillin and sulfacetamide in combination in the treatment of mixed infections. Penicillin is the drug of choice in the treatment of gonococcal infections but it is of no value in nonspecific urethritis.

Streptomycin seems to be more useful in the treatment of infections caused by gram negative bacilli. Adcock and Plumb reported results in eleven patients with urinary tract infection caused by gram negative bacilli which had failed to respond to treatment with sulfonamides or penicillin or a combination of the two. Five patients with infections caused by organisms of the aerobacteria group were cured. Five patients in whom pseudomonas aeruginosa was present alone or in combination with other bacteria experienced relief of symptoms; pyuria diminished or disappeared. The results were often temporary and the bacilluria persisted. Kleinman and Shearer presented the results of streptomycin therapy in eighteen patients with, in most instances, nonvenereal infections of the urinary tract caused by gram negative organisms. Neurogenic bladders following injuries of the spinal cord were present in seventeen patients. Results showed that daily doses of 3 Gm. promptly but only temporarily sterilized the urine because of reinfection. Their study indicated that streptomycin is not successful in the treatment of patients with neurogenic bladders because of the presence of complications such as suprapubic cystostomies, calculi, residual urine or catheterization which repeatedly cause reinfection. Pulaski reported his observations of the results of streptomycin therapy at the Holloman General Hospital, Staten Island, New York. Of 201 strains of bacteria from 63 urinary tract infections, only 16 were naturally resistant, 10 of these being in gram positive cocci. Gram negative bacilli and gram positive cocci including nonhemolytic streptococci were found highly susceptible to streptomycin. In the treatment of severe infection in 8 cases of paraplegia, there were lasting results in 3. Of 13 patients with nonvenereal urinary tract infection, lasting results were obtained within forty-eight hours in seven cases. Poor results occurred in patients with calculi, obstruction or resistant organisms. The results reported by these three investigators are in general agreement with most observers. The importance of *in vitro* studies to determine the susceptibility of the organism to streptomycin is stressed. It is also emphasized that with inadequate treatment remaining bacteria will become more resistant to the drug. The majority advocate approximately 2 Gm. a day.

From my own observation, neither penicillin nor streptomycin is to be advocated in the routine treatment of urinary tract infections. Infections with Esch. coli which represent approximately 60 per cent of those encountered are cured as a rule by mandelic acid and sulfacetamide. Sulfadiazine and sulfathiazole are almost, if not quite, as effective against the gram positive cocci as penicillin. These antibiotics do have a definite advantage in acute infections. These patients tolerate oral medication poorly. Fever and other toxic manifestations often subside rapidly following the administration of streptomycin or penicillin as indicated. These drugs are also useful as adjuncts to surgical treatment. I have found them useful in a few cases in which (with good kidney function and free drainage) the bacteria were resistant to other germicidal agents.

The treatment of infections of the urinary tract has been revolutionized by chemotherapy during the past decade. It is often possible to use specific drug therapy against specific organisms but it should be emphasized that the treatment of urinary tract infections consists of more than merely ordering a sulfonamide or penicillin for every patient with pyuria. The use of these preparations in complicated infections has been

very helpful but complete cure is rarely obtained unless there is adequate renal function, free drainage and absence of foreign bodies or devitalized tissue. These drugs have almost replaced catheter drainage in pyelitis of pregnancy, and renal pelvic lavage, once so necessary in the treatment of pyelonephritis, is now rarely resorted to. The acute fulminating infections once so frequently fatal are now readily controlled. I am sure I have not seen a kidney removed for acute fulminating pyelonephritis in the past ten years but I have seen patients with infection and poor renal drainage become dangerously sick while running the gamut of chemicals and antibiotics.

In our enthusiasm for the more recently developed germicidal therapeutic agents, we often forget the value of other therapeutic methods. Changes in the reaction of the urine was at one time employed rather extensively. During the toxic period of acute infections, alkalies may be counted upon to combat acidosis, lessen nausea and at times lessen bladder distress resulting from sensitiveness to acid urine. It is still recommended when streptomycin is administered and to lessen the toxic effects of the sulfonamides although La Towsky demonstrated that crystalluria did not occur in acid urine when the fluid intake was kept above 3,000 cc. per day. The degree of alkalinity that can be produced in the body will not affect the growth of bacteria but the urine can be brought to a degree of acidity decidedly effective in retarding most bacterial growth. Yew found that it was theoretically possible to make urine bacteriostatic by acidification alone for all organisms except Esch. coli and Aerobacter. Str. viridans and Str. hemoliticus disappeared from the culture in a pH of 5 and 5.5 respectively. It is, therefore, evident that a low acidity may have a deciding effect on the elimination of infection. The acidity of the urine is also a very deciding factor in the bactericidal effect of mandelic acid and methenamine. The most useful drugs for acidification of the urine are ammonium chloride, nitrohydrochloric acid and gluconic acid. Ammonium chloride should not be administered when infection is caused by a urea splitting organism. Patients with poor renal function should be closely observed when acidifying drugs are administered because of the danger of acidosis.

Laboratory facilities for the identification of bacteria and the determination of sensitivity to various germicides are not always available. It is possible, however, by careful observation, to judge fairly accurately the character of the predominant organism in most infections. It is well to remember that bacillary infections are more prevalent in the female than in the male and that urine infected by the colon group of organisms usually is acid and that very cloudy urine persistently alkaline is apt to be infected with staphylococci or proteus bacilli and particularly so if there is much mucous or an offensive odor. A stained smear of the centrifuged sediment is also very helpful in determining the type of infection present. It is well to remember also that infections following operations upon the urinary tract are usually of the mixed variety. A careful urine analysis and particularly the specific gravity of an early morning specimen will give a clue to the value of the renal function. If the renal function is poor or the history and examination suggest the presence of calculi or obstructive pathology the value of chemotherapy alone is apt to be disappointing.

REFERENCES

Adcock, J. D., & Plumb, R. T.: Streptomycin for Urinary Tract Infections, J. A. M. A. 133:579, 1947.

Alyea, E. P.: Sulfathiazole Therapy in Urinary Tract infections, J. Urol. 47:219, 1942.

Alyea, E. P., Daniel, W. E., & Yates, Anne: Sulfanilamide and Disulfanilamide Concentrations in the Blood and Urine, J. Urol. 41:14, 1939.

Alyea, E. P., & Parrish, A. A.: Modern Chemotherapy in Non-Specific Urinary Tract Infections, South M. J. 40:678, 1947.

Bandler, C. G., Roen, P. R., & Mulaire, V. J.: Streptomycin in Genito-Urinary Infections, J. Urol. 59:96, 1948.

Carroll, Grayson, Allen, H. N. & Doubly, E. K.: Infections of the Urinary Tract, J. A. M. A. 135:683, 1947.

Carroll, Grayson, Lewis, B., & Kappel, L.: Mandelic Acid: Its Therapeutic Value and Limitations, Am. J. Surg. 42:365, 1938.

Carroll, Grayson, Lewis B., & Kappel, L.: Sulfathiazole and the Staphylococcus in Urinary Infections, J. Urol. 45:770, 1941.

Carroll, Grayson, Lewis B., & Kappel, L.: Sodium Sulfathiazole, J. Urol. 47:209, 1942.

Everett, H. S., Vosberg, G. A., & Davis, J. M.: Sulfathalidine in Urinary Tract Infections, J. Urol. 59:83, 1948.

Exley, M.: Penicillin Treatment of Urinary Infections Caused by Pyogenic Cocci, J. Urol. 55:435, 1946.

Harrell, G. T., Herndon, E. G., Gillikin, C. M., & Aikawa, J. K.: Bacteriologic Study of the Factors Affecting the Efficicacy of Streptomycin Therapy of Urinary Tract Infections, N. C. J. Clin Investigation 26:577, 1947.

La Towsky, L. W.: The Clinical Use of Sulfadiazine in Non-Specific Urinary Tract Infections. A Study of 100 Cases, J. Urol, 50:625, 1942.

Lehr, D.: Experimental and Clinial Studies with Sulfacetamide: Toxicity and Efficiency in Bacillary Infections of the Urinary Tract, J. Urol. 54:87, 1945.

Miller, C. Phillip: Antibiotics, J. A. M. A. 135:749, 1947.

Mulholland, S. W.: Sulfonamides and Penicillin, J. Urol. 57:196, 1947.

Pulaski, E. J., & Amspacher, W. H.: Streptomycin Therapy in Urinary Tract Infections, Surg. Gynec. and Obst. 85:107, 1947.

Rains, S. L.: Present Status of Streptomycin Therapy, J. Urol. 57:79, 1947.

Reid, Roger D., & Anderson, Dorothy T.: A Method for Determining Bacterial Resistance and Susceptibility to Sulfonamides and Penicillin, Science 103:454, 1946.

Young, H. H., Hill, J. H., Jewett, H. J., & Satterthwaite, R. W.: Sulfacetimide Toxicity and Efficacy in Gonorrhea and Urinary Tract Infections. Preliminary Report, J. Urol, 45:903-928 (June) 1941.

CANCER OF THE BREAST

By T. P. MANTZ, M. D., EVERETT SQUIRE, M. D., J. ROSS HUNTER, M. D.*, and WALTER PUTSCHAR, M. D., Charleston, West Virginia

This statistical study of 49 traced cases of cancer of the breast treated in the Mountain State Hospital Tumor clinic is presented with no idea in mind to draw any definite and final conclusions regarding the treatment of cancer of the breast, but to evaluate our results and compare them with those of others in an effort to reemphasize that early recognition of the disease while it is confined to a small area is the greatest single factor in its successful treatment and in the lowering of its mortality rate. It is with this group of patients having early lesions that we are most concerned. Radical surgical technique has been reasonably well standardized and if we are to improve on our five year cures we must depend on other factors such as education of the patient to seek medical advice and aid when the lesion is first noticed and persuasion of the physician to institute biopsy, and immediate radical surgery if malignancy is found. We regret to state that we still see patients who, on consulting their family physician, have been told that their breast tumor needed only watching unless it grew larger or caused symptoms. The only way we can be sure of the true nature of a lump in the breast is by removal and microscopic examination of the tumor. It is at this stage, i. e., when the tumor offers no distinguishing characteristics, that diagnosis should be made. It is now the practice of this Clinic to remove and examine microscopically every discrete breast tumor regardless of the age of the patient or the location or duration of the tumor, because herein lies not only the group of patients having the greatest five year survival rate but also our opportunity to detect the disease before metastasis to the axilla has occurred. Clinical appraisal of axillary nodes often is fallacious, especially in the failure to recognize the presence of nodes which are actually already involved. Thirty per cent of involved axillary nodes are not palpable. When we wait for the textbook signs of carcinoma of the breast e. g., "orange peel" skin, fixation, retraction of the nipple, ulceration or axillary nodes, we have lost the opportunity for early detection and cure because these signs actually are those of a hopeless outlook for cure. Radical operation alone will give from 65 to 75 per cent five year survivals whereas with axillary metastasis the survival rate is but 30 to 40 per cent.

There is no case of Paget's disease or of mucoid carcinoma recorded in this study.

Table 1 shows the classification adopted. Breast cancer presents marked variations in phy-

*Deceased before publication.

Adair, Harrington and Marshal report as follows:

	7,419 cases Adair 1.	6,511 cases Harrington 2.	238 cases Marshal 3.
5 year survivals with no matastases at time of operation	76.8%	75.8%	75%
5 year survivals with axillary metastases at time of operation	41.8% with postoperative irradiation	30.5% without postoperative irradiation	37% with postoperative irradiation
Over 5 year survival rate	51%	47.6%	52%

There is about an 8 per cent to 10 per cent higher survival rate in those cases with axillary metastases in which postoperative irradiation was used.

Pathologic Classification—Table 1

	Living	*Deceased*
Group I—Scirrhous carcinoma	16	5
Group II—Carcinoma simplex solidum	10	4
Group III—Medullary carcinoma	5	0
Group IV—Squamous cell carcinoma	1	1
Group V—Adeno carcinoma	4	2
Group VI—Miscellaneous	1	
a. Low grade arising from Schimmelbusch's disease		
Total	37	12

sical appearance, rapidity of growth and histologic arrangement. We may find an abundance of fibrous tissue compared to the epithelial component. These tumors are called hard or scirrhous carcinomas. If the fibrous stroma and the solid cords of cancer tissue are about equal in amount they are called simplex solidum. The tumor may be highly cellular with comparatively little stroma. These are called medullary carcinomas. When the epithelial cells are arranged in obvious tubular or glandular fashion they are called adenocarcinoma. As will be noted in table 1 scirrhous carcinoma and carcinoma simplex solidum comprise 35 of the 49 cases.

Age Distribution—Table 2

Age in years	20-29	30-39	40-49	50-59	60-69	70-79	Total
Group I		3	5	6	7		21
Group II		3	3	3	3	2	14
Group III	1		2	1	1		5
Group IV			2				2
Group V			1	1	3	1	6
Group VI			1				1
	1	6	14	11	14	3	49

As will be noted in table 2, our cases were comparatively equally distributed between ages 40 and 70.

Marital Status—Table 3

Relation of cancer to childbearing and nursing

	Married	Single	Bearing children	No children	Nursed	No record of nursing
Group I	19	2	15	6	6	9
Group II	12	2	8	6	5	3
Group III	5		3	2	3	
Group IV	1	1	1	1	1	
Group V	6		6		1	5
Group VI	1		1			1
	44	5	34	15	16	18

Table No. 3 shows that 90 per cent of the patients were married. Seventy per cent of those that were married had children.

Fifteen patients had no children; 70.9 per cent of the whole group had children.

In other groups of cases cancer has been more common in the multipara by nearly 2 to 1.

Table 4

	History of Breast abscess	Mastitis	Trauma	Of long duration	None	Not recorded
Group I	2	2	4		10	3
Group II			1		8	4
Group III	1				4	
Group IV			1		1	
Group V			2		3	1
Group VI		1				1
	3	3	8		26	9

Fourteen of the 49 cases had a history of abscess, mastitis or trauma. Nine were not recorded. This is a percentage worth noting.

TREATMENT

Operation.—Radical breast dissection after the method of Halsted stressing the following additional points:

1. It is desirable to make incisions far enough medially to prevent them from falling into the axilla after the latter has been dissected, thus preventing contracture. The Rodman incision provides adequate exposure of the axilla and causes minimal contracture.

2. All subcutaneous fat is dissected from the skin.

3. Remove all tissue from axillary vein, tying off all branches close to the vein wall, individually ligating small arteries and veins. If the axillary vein is invaded it is resected without hesitation. Trimble's experience has shown that no great harm will result.

4. Preserve the subscapular artery, the long thoracic nerve and the thoracodorsal nerves, if possible.

5. Wash wound thoroughly with warm saline solution to remove fat particles, blood clots, contaminating bacteria and loose cancer cells.

Table 5

Time lapse from discovery of lump by patient to treatment (living and deceased patients)

9 days	2	1 year	11	5 years	0
2 weeks	3	2 years	6	6 years	3
1 month	5	3 years	4	8 years	3
3 months	6	4 years	0	10 years	3
6 months	3			Total	49

Three out of 5 of our cases had breast tumor 1 year or longer before receiving treatment.
Four out of 5 of those with metastasis at time of operation had tumor longer than 1 year.
Three out of 5 patients living had tumor one year or less before treatment.

Table 6

Breast Involved

Twenty-two of the tumors occurred in the left breast, 27 in the right breast.

Table 7

First noticeable symptoms

Lump in breast	21
Tenderness	18
Serious discharge from nipple	5
Bloody discharge from nipple	2
External lesion	2
Lump under arm	1

Lump, tenderness or both have been the first noticeable signs and symptoms in 4 out of 5 cases.

Table 8

Location of Tumor

	Not recorded	Entire breast	Upper outer	Upper inner	Outer lower	Inner lower	Upper half	Lower half	Mid portion
Group I	5	2	5	2	4				3
Group II	2	1	3	1	2		1		3
Group III			2	2			1		
Group IV			1		1				
Group V			1	1	1				3
Group VI						1			1
	7	3	12	6	8	1	2		10

The outer quadrants and midbreasts were the most common locations of tumor, with the upper outer quadrant in the largest number of cases. Some patients came to the Clinic after the disease was far advanced, making it difficult to determine where the lesion arose unless the patient could remember.

6. Place a long rubber drain in the posterior axilla and bring out through a stab wound.

7. Plastic skin closure without graft is preferable if this can be accomplished without tension. As stated by White, there is not yet sufficient proof that the Halsted skin removal, with Thiersch graft, gives a reduced incidence of local recurrence over the plastic skin closure of Handley and others.

8. Apply a snug mechanic's waste or sea

Table 9

Alive

	Recurrence			Metastasis					
	None	Skin	Axilla	Bone	Lung	Cervical glands	Opposite breast	Multiple	Total
Group I	8	5	2	1					16
Group II	9								9
Group III	4		1						5
Group IV	1								1
Group V	4								4
Group VI	2								2
									37

Deceased

Group I	1			2	1			1	5
Group II	1		1					2	4
Group III								0	0
Group IV								1	1
Group V				1				1	2
Group VI									0
									12

A Group I—One died of tbc.

B Group III—One patient in 1944 (carcinoma simplex) had had medullary carinoma in the other breast two years later.

Table 10

Consolidated Vital Statistics of All Patients

Years after operation

	1	2	3	4	5	6	7	8	9	10	11 to 15	Total
Alive and well without disease												
A. Number with microscopic metastases at time of operation	5	5		1		1						12
B. Number without microscopic metastases at time of operation	2	2	2	5		3	2	1				17
Died with metastases												
A. Number with microscopic metastases tases at time of operation	4	4	1		1	1						11
B. Number without microscopic metastases at time of operation			1									1
Alive with recurrence and metastases												
A. Number with microscopic metastases at time of operation		3	1									4
Number without microscopic metastases at time of operation		1									3	4
												49

Of the 22 cases operated—not having metastases at time of operation only one is deceased—3 years.

17 are alive and well without metastases. 4 are alive with metastases. Of this group 16 or 72% have lived 3 years or longer.

sponge dressing with elastic bandage, leaving the arm free.

9. On the second postoperative day the arm is moved upward, having the patient touch the back of her head. These exercises are carried out daily thereafter.

Roentgen Therapy.—Irradiation properly administered in sufficient amounts is an extremely valuable adjunct to surgery in breast cancer. The amount and direction of treatment depend upon the conditions present.

Sterilization by irradiation is advocated in all cases in the menstrual period of life.

Postoperative x-ray therapy usually is begun about two weeks following surgery or as soon as the patient's general condition is good, even though the wound is not entirely healed. Metastatic areas of involvement in the soft tissue and bones as well as local recurrences receive treatment. Many painful metastatic areas are relieved for months.

Preoperative irradiation is not advocated since this form of treatment delays surgery for several weeks and since the statistical reports are somewhat disappointing.

Hormone Therapy.—We have used hormones in a small number of cases. Our results so far have been discouraging. We have a few far advanced cases on the drug 'teropterin'.* The euphoria and the improvement in mental outlook of the patients are remarkable. They have gained in weight and their general physical condition has improved. However, we have noticed no change in the progression of the disease in these cases.

CONCLUSIONS

1. Forty-nine cases of cancer of the breast were statistically reviewed.

2. Early recognition of the disease is the greatest single factor in its successful treatment.

3. Every discrete tumor of the breast should be removed and examined microscopically by frozen section, having the patient prepared for immediate radical operation if cancer is found to be present.

4. Postoperative irradiation is an adjunct to surgery.

5. It is impossible to draw any final conclusions from this small group of patients but the overall statistics show similarity to those of large groups of patients reported by others.

*The teropterin used was obtained through the courtesy of Lederle Laboratories.

REFERENCES

1. Adair, Frank E.: The Role of Surgery and Irradiation in Cancer of the Breast, J. A. M. A. 121:553-559 (Feb. 20) 1943.
2. Harrington, Stewart W.: Survival Rates of Radical Mastectomy for Unilateral and Bilateral Carcinoma of the Breast, Surgery 19:154-166 (Jan.) 1946.
3. Marshal, Samuel F.: Carcinoma of the Breast: Results of Combined Treatment with Surgery and Roentgen Rays, Ann. Surg. 125:688-702 (June) 1947.
4. Trimble, I. R.: Surg., Gynec. & Obst. 70:82-92 (Jan.) 1940.
5. Rodman, J. S.: Skin Removal in Radical Breast Amputation, Ann. Surg. 118:694, 1943.
6. White, William C.: The Problem of Local Recurrence after Radical Mastectomy for Carcinoma, Surgery 19:149-153 (Jan.) 1946.

INDISCRIMINATE USE OF ESTROGENS

One of the factors that enters into indiscriminate use of estrogens is addiction. There are a few people who become "shot-conscious" and require injections of estrogenic hormones, or saline for that matter, to relieve their symptoms. There are also a few people, who having been given large amounts of estrogenic substance in pill form, become addicted to the pill. I have seen several patients who have been given stilbestrol of one manufacture, when changed to another in identical dosage, complain from lack of benefit from this second drug, simply because it was not of the same color or shape.

A factor which aids addiction is the fact that, in some localities, estrogenic substances can be purchased over the counter without prescription. A large number of patients or some other persons have been taught to give the injections without the supervision of the physician.

Long-continued use of estrogenic hormones in injectable form creates quite an expense to the patient, both in physician's bills and in loss of time and traveling expenses getting to the doctor's office several times a week.

The excessive use of estrogenic substances may be a factor in the cause or stimulation of cancer. It will also cause excessive uterine bleeding as well as prolongation of the menopause. Estrogens may be habit-forming as well as expensive to the patient if not used judiciously. These factors may be prevented if cases are carefully selected and such substances as vitamin B^1 vitamin E and male sex hormone are substituted for estrogenic substances.—J. M. Habel, Jr., M. D., in Virginia Medical Monthly.

MILK FORMULAS

One of the trends in prescribing of milk formulas for babies is the reduction and early elimination of the carbohydrate added to the formula. McCulloch even advises against ever adding sugar in any form to the formula. He claims that under this regime the children develop better, are not so fat, stand hot weather better, and are more active.—J. F. in Ohio St. Med. J.

PEDIATRIC OPHTHALMOLOGY*

By MELVIN W. McGEHEE, M. D.,
Huntington, West Virginia

Pediatrics, although comparatively new as a special branch of medicine, rightfully can be given credit for its contribution to longevity. Since the beginning of the century the average length of life in this country has increased almost 33 1/3 per cent. The recent increase in births, combined with the vast strides made by medical science within the past two decades, especially in the fields of epidemiology, immunology, therapeutics and nutrition, has increased life expectancy and thus provided more younger patients than ever before for the pediatrician and general practitioner. Ophthalmology has much to offer the science of pediatrics and has a definite place in dealing with the eyes of these members of the youngest generation.

The greatest majority of these children are born hyperopic (farsighted) which condition is not progressive. Nature brings them into the world with a globular lens and a short eyeball producing what might be thought of as a normal hyperopa. A newborn infant will, within the first ten minutes, close his eyelids to shut out bright light. He will follow a bright light after ten days and at one month can perceive large objects. At this time he recognizes his mother's face and four weeks later distinguishes his source of nourishment, be it breast or bottle. Before four months have passed he follows moving objects. At six months the macula has completed its development and with resultant sharper vision the infant begins to distinguish details. From six months until his second birthday he is strengthening his binocular visual functions so that at four and one-half years his visual power attains the adult level of 20/20.

The pediatrician should possess in addition to his usual ophthalmoscope an illiterate "E" chart hung next to a number chart. Many physicians have a small pencil flashlight which is most useful in inspecting the eye and adnexa. Some type of anesthetic such as 1/2 per cent pontocain is a practical necessity and 1 per cent alkaline fluorescein solution will help in localizing abrasions of the cornea or conjunctiva. A solution of 1:5000 zephiran is much better than normal saline or boric acid solutions for irrigation. Sulfathiazole and mercury bichloride ointments should be at hand. Restraint of the young patient should not be resorted to unless necessary but when indicated should certainly be done.

*Presented before the Logan County Medical Society, Logan, West Virginia, May 7, 1947.

Symptoms of eye trouble in a child may be exhibited by lid squeezing when looking at objects. He may stumble, trip or run into small objects. The eyes may be rubbed frequently. Blinking may occur along with irritability and other nervous manifestations. The child may lack interest in familiar distant objects and ball games and be unable to distinguish colors. The lids may show edema with marginal injection and encrustations. There may be a history of recurrent styes (hordeolosis). Epiphora or lacrimation may occur and the eyes may cross occasionally or constantly. The child may complain of dizziness, headaches or nausea following use of the eyes. There may be blurred or double vision.

COMMON EYE DISEASES IN CHILDHOOD—AFFECTIONS OF LIDS AND ADNEXA

Ptosis, when present in infants and young children is (in most cases) a congenital developmental defect due to an abnormality at the tip of the nucleus of the third nerve as it lies about the aqueduct. Spaeth[1] presents the surgical indications based upon the type of ptosis present and states that crutch glasses with springs on the temples are practical in infants but that interference should not be delayed beyond the second year.

Hordeolum (stye), which is an eyelash root infection generally due to the staphylococcus, oftentimes follows exanthemata or some debilitating disease in childhood. I generally do not incise these lesions as the use of hot compresses usually will produce satisfactory localization and subsequent spontaneous rupture. Applications of 5 per cent sulfathiazole ointment after meals and at bedtime will suffice until the local area subsides but must be continued at bedtime and once in the morning for three weeks in order to prevent recurrence or hordeolosis.

Chalazion (inside or blind stye) is due to blockage of a meibomian gland followed by formation of granulation tissue within the gland. It is not often inflamed (hordeolum internum) but if so should be treated with cold compresses and an attempt should be made to abort the infection. If large and unsightly, it may be necessary to incise and curet the gland through the conjunctiva.

Blepharitis or lid margin inflammation is quite common in children although not as much so as conjunctivitis. Generally called "granulated lids" by the laity, it is very resistant to eradication and is often accompanied by conjunctivitis (blepharoconjunctivitis). It is caused by a chronic

pathogenic variety of staphylococcus, and it is seen in two forms. In the scaly type it is characterized by a scaly or waxy secretion at the roots of the lashes. The ulcerative type presents minute abscesses at the site of the lashes and the lashes may be permanently lost because of destruction of the follicles. The treatment is both general and local. As in hordeolosis and recurrent chalazia systemic malfunctions and debilitative conditions must be corrected. Tuberculous diathesis seems to be a contributing factor in some children. Refractive errors occasionally may be contributory. Local treatment consists primarily in removing the crusts and applying sulfathiazole ointment for quite some time.

CONJUNCTIVAL AFFECTIONS

Before discussing the various common lesions of the conjunctiva, it seems proper to have an understanding concerning certain common remarks and widely used drugs in this group of affections.

Although the term "pink-eye" is synonymous in the pediatrician's mind with Koch-Weeks conjunctivitis, to the mother it simply means an eye that is discharging pus. By the same token she accepts the term "cold in the eye." These terms should be discarded because the delay involved in using simple home remedies for a supposedly harmless eye infection finally brings the child to the office with a vision-destroying condition. Much valuable time is lost. Our own common diagnostic term "conjunctivitis" is quite applicable.

From the time we can remember boric acid has been on the pinnacle as a panacea for all eye diseases and as such has created much false security. It is an ineffectual drug, being so much "eyewash," when something more specific such as 1:5000 mercury oxycyanide solution or 1:5000 zephiran solution could be used. Argyrol solution (the silver proteins) and yellow oxide of mercury ointment should be similarly condemned. The last two drugs seem to be the favorite of "treating druggists." Home remedies have no place in the treatment of the eyes of children. Competent care and treatment by the pediatrician and his eye physician colleague can preserve good vision.

The indiscriminate use of penicillin in minor or self-limited inflammations should be discouraged. Restraint in its use should be employed rather than produce a sensitivity (which we have all seen occur) and thus deprive the child of the value of penicillin in time of great need.

Conjunctivitis is the most frequently occurring ocular disease of childhood. It is best to observe each case closely as some cases of conjunctivitis are mistaken for iridocyclitis and vice versa.

Acute catarrhal conjunctivitis is a contagious type produced by several organisms of which the commonest are the Koch-Weeks bacillus and the pneumococcus. The appearance of these eyes is familiar to us all. The patient should be semi-isolated and the eyes treated with 1/4 per cent zinc sulfate and 5 per cent sulfathiazole ointments used on alternate hours. Thirty per cent solution of sodium sulfacetimide or Westhiazole, which contains 5 per cent sulfathiazole, are both effective preparations. It is well to remember that the cul-de-sac will hold only one drop of solution and that the puncta should be held with the lids closed for two minutes following instillations. The drugs are used often in order to keep the therapeutic concentration high. Cold compresses are at times helpful. As in hordeolosis it is a good idea to continue the use of medicaments for several days as recurrences are common and chronic conjunctivitis might occur, particularly if the staphylococcus is the offending organism.

Chronic catarrhal conjunctivitis, oftentimes a very refractory condition, very persistent and prolonged, may be a sequela of the acute stage or may develop insidiously. Thygeson[2] aptly states that it rarely heals spontaneously and constitutes a very stubborn group to deal with. It may be secondary to other conditions such as chronic dacryocystitis or meibomianitis and more than likely blepharoconjunctivitis is present. Staphylococci are normal saprophytes on the conjunctiva but in these cases a stubborn toxic pathogenic type of staphylococcus is present upon the lid margins and conjunctiva[2]. Treatment of these cases is both systemic and local with emphasis upon the local therapy, particularly the lid margins. A few cases may be due to the Morax-Axenfeld diplobacillus and are amenable to 1/4 per cent zinc sulphate solution or ointment. One may use a 1:5000 aqueous solution of zephiran or mercury oxycyanide in normal saline followed in fifteen minutes with 5 per cent sulfathiazole ointment into the lower cul-de-sac and especially onto the lid margins. Results of treatment frequently are disappointing and referral to an eye colleague is probably the best procedure for the young patient.

Vernal conjunctivitis is an allergic catarrh of the conjunctiva manifested by intense itching, moderate photophobia and burning of the eyes plus some stringy mucoid secretion. Of the two

varieties, limbal and lid, the latter is the more common and objectively shows large, hard, flat, pale papillae on the upper tarsal conjunctiva. The causative allergen usually resists isolation and the disease persists for 5 to 10 years, usually disappearing spontaneously. Treatment locally consists of the wearing of dark glasses and a broad brimmed hat out of doors. Cold compresses and copious cool irrigations will make these patients more comfortable. The irritating secretion may be dissolved with 1 per cent monohydrated sodium bicarbonate or 3 per cent sodium bicarbonate solution dropped in the cul-de-sac four times daily. One per cent neosynephrine solution mixed with pontacain 1 per cent in equal parts used one-half hour after the carbonate solutions produces a grateful child. Iliff[3] reports success with beta irradiation in controlling these cases.

Phlyctenular conjunctivitis (keratoconjunctivitis) is essentially a disease of childhood and adolescense occurring in anemic, undernourished children. It is an allergic response of the conjunctiva and cornea to a foreign protein with a large number of the cases showing a positive tuberculin test. An activating local factor of infection is aided and abetted by poor diet and latent tuberculosis. The outstanding clinical feature, the phlyctenule, is a pinhead-size reddish elevation at the limbus with adjacent sector-shaped hyperemia of the conjunctiva. Lacrimation and photophobia are, as a rule, very marked. Local therapy requires hot compresses, sulfathiazole-atropine ointment several times daily and dark glasses. Systemic therapy in conjunction with the foregoing will cause most cases to resolve in two to three weeks.

AFFECTIONS IN THE NEWBORN

Ophthalmia neonatorum is a general grouping of conjunctival affections of the newborn of which gonorrheal ophthalmia is the most important because it is the only one which may produce visual damage. The beginning of the end of the use of silver nitrate in the eyes of the newborn may be on the horizon. Lehrfeld[4] expressed the idea of many when he said that the scientific approach to treatment is at the source of the infection (which, in this instance, is the birth canal) and, with the known effectiveness of the present antibiotics, it may be short of folly to employ silver. However, until this problem is fully studied it probably is better to proceed as heretofore in our treatment of these cases.

Costenbader[5] aptly pointed up the situation in stating that when inflamed eyes are encountered in a newborn the problem of differential diagnosis immediately arises so that the proper treatment may be employed. These cases often worry the parents because they know of the possibilities and dangers of gonorrhea. The ability to make a rapid differentiation between chemical (Ag.) conjunctivitis, inclusion blenorrhea, acute catarrhal ("nonspecific") conjunctivitis and lacrimal stenosis so as to be able to inform the parents of the harmlessness of the condition is a decided asset.

Chemical conjunctivitis produced by silver nitrate probably is not as common as is generally believed. Nothing is found microscopically and the condition will subside spontaneously within forty-eight to seventy-two hours.

Gonorrheal conjunctivitis occurs within four days of birth and reveals an intense inflammation of the lids and conjunctiva with much purulent discharge. On smear the gram negative diplococcus is found.

Inclusion blenorrhea never has been known to occur before the fifth day whereas gonorrheal ophthalmia occurs on the second to fourth day and later only in extremely rare cases of extragential infection. It may resemble gonorrheal ophthalmia in severity but generally a clinical diagnosis may be made on the basis of the great thickening of the lower fornix and lower conjunctiva with relative sparing of the tarsal conjunctiva of the upper lid. Inclusion blenorrhea and gonorrhea are the only two diseases which produce conjunctival thickening but in gonorrhea the upper tarsal conjunctiva is equally affected. Microscopic differentiation of the epithelial scrapings is very simple with one slide for gram stain for the gonococcus and the other Giemsa-stained for inclusion bodies which are usually so numerous that anyone can identify them. Both inclusion blenorrhea, which is a virus, and gonorrhea, which is bacterial in origin, respond well to penicillin and sulfathiazole used parenterally and locally. The drugs are used hourly locally in order to keep the therapeutic concentration high.

The ordinary bacterial types of conjunctivitis in the newborn, that is, the acute catarrhal nonspecific varieties produced by staphylococci, pneumococci, influenza bacilli, B. coli, et cetra, never cause much trouble. They respond to any mild antiseptic therapy and may even subside spontaneously.

Congenital dacryostenosis is of common occurrence in the newborn. It is caused by the presence of mucous plugs or inspissated debris or a failure of the membrane between the nasola-

crimal duct and the nasal cavity to absorb. Epiphora is present following birth followed in a few weeks by mucopurulent discharge. Most of these will clear up spontaneously but some require the use of an antiseptic such as sulfathiazole ointment and hydraulic pressure over the sac to remove the plug or membrane. Selinger[6] has warned us that the method of using this pressure is often incorrect. The secretion is not pressed out at first but is utilized for tamponade backwards and downwards in order to exert the effect of pressure down the sac and duct. The mother should be shown how this is properly performed and the nail on the finger she will use should be trimmed and kept very short. If this procedure is not successful by the ninth month the baby should be sent to the ophthalmologist for irrigation of the sac or probing.

It is a good idea for us to differentiate between epiphora and lacrimation. Epiphora is an overflow of tears onto the face as a sign of obstruction somewhere in the nasolacrimal system. Lacrimation is nature's signal of an irritation of the eye—too many tears to pass through the puncta.

CORNEAL AFFECTIONS

In addition to his ophthalmoscope every pediatrician should have in his armamentarium at least a small pencil light and these two drugs: 1/2 per cent pontocain solution for anesthesia and 2 per cent fluorescein in 1:5000 aqueous merthiolate for staining corneal and conjunctival lesions.

Corneal abrasions and foreign bodies are the most common lesions the child's physician will encounter. Minor corneal abrasions will require patching for a short length of time and the instillation of sulfathiazole-metycaine ointment for discomfort. Should purulent conjunctivitis be present no patch should be applied but frequent irrigations of an antiseptic solution should be followed with the above ointment. The best procedure in such a case would be to request the help of an eye colleague as such cases are potential corneal ulcers. Foreign bodies to be accurately visualized and removed often require mummifying the small patient. Pontocain dropped onto the cul-de-sac every minute for three minutes provides adequate anesthesia after which the foreign body may be removed with the tip of a small thin cotton applicator. Flat toothpicks with the cotton wet with zephiran solution are excellent. The eye should be patched for a short time.

Corneal ulcers may be secondary to conjunctivitis for which the treatment is, of course, aimed at the original cause. It is not too uncommon about the limbus in the catarrhal forms. It is probably a good policy for the pediatrician to consider any type of corneal ulcer other than the foregoing as a responsibility for the ophthalmologist.

Interstitial keratitis is an infiltration of the middle and deep layers of the corneal stroma. In the greatest number of cases it is due to congenital syphilis although other causative factors may be tuberculosis, trauma, allergy or some other condition. The well known triad does not have to be present and it may occur in spite of specific therapy. Many of the syphilitic cases will show a positive tuberculin. The condition is an allergic response produced by corneal sensitization. The prognosis is guarded as to useful vision although ultimately most cases will respond to use of the heavy metals in conjunction with atropine, hot compresses, dark glasses, typhoid therapy and systemic stimulation with the vitamins and iron.

MISCELLANEOUS AFFECTIONS

The heredofamilial congenital diseases constitute a large group and will not be discussed herein. They do not necessarily announce their presence at birth.

Dacryocystitis is, in its chronic form, a sequela of stenosis of the nasolacrimal duct which leads to ultimate mucocele of the lacrimal sac. The acute form generally is an exacerbation of the chronic except in rare cases in which it follows osteomyelitis of either the lacrimal or the maxillary bone. Pressure over the tear sac causes regurgitation of the mucopurulent secretion through the puncta. The acute form is treated by the use of local hot applications. Some innocuous oil or ointment is used to protect the skin from maceration. The sulfonamides and/or penicillin are administered. Subsequently, incision of the sac is done through the skin if localization occurs. The chronic form requires the attention of the ophthalmologist.

Orbital cellulitis, although not common, should be recognized by the pediatrician. Therapy should be directed primarily to the sinuses which constitute the commonest source of the infection which is characterized by acutely inflamed lids, proptosis and limitation of motion of the eye in an acutely ill child. Penicillin and the sulfonamides are definitely indicated and on localization the ophthalmologist should drain. Tyrothricin may have to be employed. These conditions are dangerous.

Congenital cataract has been widely discussed since Gregg[7] of Australia reported the first 78 cases in 1942 following a 1940 epidemic of measles in that country. Although the web of proof concerning virus inflammations during the first trimester of pregnancy is being woven tighter, the point has not yet been reached where abortions should be commonly adhered to. The significance of this problem has produced increased study which will soon give us the answer.

Congenital glaucoma is unfortunately not too rare and is due to a defect in the outflow mechanism of the infant's eye. These cases should be referred to the ophthalmologist immediately. They are characterized by a large, hard eyeball.

Retinoblastoma (glioma) is a malignant intra-ocular tumor of childhood which in certain lights reveals itself by a yellowish reflex. It must be differentiated from retrolental fibroplasia (Terry-Owens disease) of an as yet unknown etiology and for which there is yet no satisfactory treatment. Early enucleation may prevent the rapid spread of the glioma and if the condition is bilateral, as it is in 25 per cent of cases, prolonged x-ray therapy may effect a cure.

It is interesting to note that the second ophthalmic disease discovered in the United States is entirely concerned with premature infants, namely, retrolental fibroplasia or, as it has been eponymised by Vail[8], "Terry-Owens disease." I have seen this lesion in one case in which it was complete and bilateral in a premature infant. It has now been proven by Owens and Owens[9] that the lesion definitely occurs after birth and that the changes are foremost in the retina and retinal vessels. The etiology is unknown and there is no available therapy at the present time.

REFRACTIVE ERRORS IN CHILDHOOD

The pediatrician would do well to possess an illiterate "E" chart as the pictured ones require previous experience. It is only necessary to show "which way the fingers point" on one letter of each line until the child begins to stumble, then that entire line is tried, otherwise the child may tire or become disinterested. Each eye is, of course, tested separately and no pressure permitted upon the screened eye. The number chart hangs next to the "E" chart for use in children of school age. The child's ability to read 20/20 or 20/15 is only a quantitative criterion and gives no lead as to his visual quality. He may see quite well but still complain of headaches after eye use, tired eyes, irritability, red, irritated lids and may show poor progress in school.

Most babies are born with "congenital hyperopia" or farsightedness just as nature intended. Some of these eyes may possess an abnormal amount which remains unaltered and later fatigue of the eyes develops in the child because of the excessive accommodative effort necessary to see satisfactorily even in the distance. With increased near use of the eyes this taxing of accommodation results in symptoms. This type of child is often "school dull and life bright." He prefers to look out of the window rather than study and is often the best in outdoor games.

The myopic or "nearsighted" child cannot see the blackboard very well and becomes a bookworm with excellent school marks. Most of these cases seen at around eight years of age are often unaware of the insidious onset of this condition until the teacher suggests an eye examination or the parents suspect poor vision. These patients do not often have any other symptom except poor distant vision unless by squeezing the lids to force the poor vision into a 20/20 world, the circulation of the eyelids and conjunctiva is altered and then local eye irritation may be present. This eyeball is too large for nature's use and requires glasses for constant wear if vision is to be normal. Close work should be in sensible proportion and under optimum lighting conditions. These cases have to be observed often by the oculist as some continue to progress but most cases of this type fortunately level off following attainment of adolescence.

In astigmatism, which is 95 per cent corneal in origin, the child may not be disturbed if the amount is low but in the higher grades the effort expended by the intra-ocular muscles to correct an asymmetrical image may be very great. Accommodation keeps the image clear but the effort is too great so that the nervous system pays the ultimate penalty. These children of course, need glasses constantly.

Glasses are important for proper eye health and nothing but glasses will correct the refractive errors and relieve the child's symptoms. The myopic eye, already too large, will certainly not get smaller. The hyperopic eye may go along with the child's growth, enlarge, and thus the farsightedness decreases in amount even to later myopia if the original hyperopia is somewhat low. Astigmatism may alter in amount. Exercises have no place in the treatment of these errors but improper reading habits should be corrected. All children require a mydriatic for proper examination.

STRABISMUS

Strabismus, squint, or crossed-eye is the most important single affection of infants' and children's eyes. In this group of cases the pediatrician and ophthalmologist should work closely together as careful surveillance by both is necessary if the utmost is to be accomplished.

Every pediatrician, or family physician, who sees one of these patients must have impressed indelibly upon his own mind and must impress upon the mother the fact that her child has disruption of binocular single vision in addition to the obvious cosmetic deformity which will not be "outgrown." It is important to remember that the only thing these small patients will outgrow is their baby teeth and their clothes. Early treatment may prevent the development of disuse loss of vision—amblyopia exanopsia—and other ocular malfunctions. Someone has aptly stated the situation in this fashion: "see before seven many cures before eleven, see after seven few cures under heaven."

The doctor must realize that a child may not squint in his presence and in this type of case respect should be given to the mother's report and he should refer this child to his ophthalmologist for further study. Epicanthus and facial asymmetry may require differentiation from true squint. They are occasionally found coexistent. The parents see more white sclera on the temporal side in case the baby has epicanthus, and the pediatrician can easily demonstrate the harmlessness of this condition (which the infant will outgrow) by pinching up the skin across the nasal bridge.

Whether the eyes turn in or out, these cases require early study. Over 50 per cent are produced by hereditary factors oftentimes exhibited in the parents themselves. A large group are caused by a defective fusion faculty. Refractive errors play a large part in their etiology. These three important factors, hereditary tendency, deficient fusion and refractive errors, may occur together. Squint will not develop in the presence of a normally active fusion faculty. Accident or disease may weaken this faculty and thus squint occurs.

These cases occur in two groups as a rule: at birth, or between the ages of 18 months and 4 years. There is a period during the first six months until the macula is fully developed when prognosis as to a permanent squint cannot be definitely made. After this time has elapsed the patient should definitely be seen by the ophthalmologist.

Correction of constitutional disorders which might be contributory should receive proper attention. Many of these youngsters are highly nervous and need much more rest and attention than normal children of the same age. The ophthalmologist always examines these children under a mydriatic for refractive errors and intraocular abnormalities. It is surprising how well even a twelve month old infant will accept and wear his glasses.

SUMMARY

1. The pediatrician, the general practioner and the obstetrician, in their association with these newborns and children, are seeing the future eyes of America. These small patients deserve the greatest respect and the best advice and therapy that we can give them. The responsibility of the pediatrician in dealing with the eyes of his patients cannot be overstressed.

2. The commonest affection of these young eyes is conjunctivitis, followed closely by plepharitis or blepharoconjunctivitis.

3. The most neglected cases in ophthalmology occur in these youngsters. I refer to the cross-eyed child. A positive attitude regarding early treatment is essential and education of the teacher and mother is not our most difficult task but it is within our medical family that the educational task is most difficult. These children should never be sent to an optomerist.

4. Finally, to dispense with those "eyewash" drugs, e. g., the yellow oxide of mercury, the boric acid solution and the silver proteins, will certainly benefit pediatric ophthalmology.

BIBLIOGRAPHY

1. Spaeth, E. B.: Congenital Ptosis. Post-Graduate Course in Ophthalmology, Geo. Washington School of Medicine, 8: 360-370, 1947.
2. Thygeson, P.: Conjunctivities. Post-Graduate Course in Ophthalmology, Geo. Washington School of Medicine, Vol. 6, 1940.
3. Iliff, C. E.: Beta Irradiation in Ophthalmology, Tr. Am. Acad. Ophth. & Otolaryng., (Sept.-Oct.) 1946, 36-45.
4. Lehrfeld, L.: Letter to the Editor, J. A. M. A. 135:306, (Oct. 7) 1947.
5. Costenbader, F. D.: Ocular Affections of the Newborn, *W. Va. Medical Journal* 44:36-40, (Feb.) 1948.
6. Selinger, E.: Office Treatment of the Eye, ed. 1, Chicago, Year Book Publishers, 1947, p. 183.
7. Gregg, N. M.: Congenital Cataract Following German Measles in the Mother, Tr. Ophth. Soc. Australia 3:35-46, 1942.
8. Vail, D.: Terry-Owens Disease, Am. J. Ophth. 31:738-739 (June) 1948.
9. Owens, Wm. C., & Owens, E. U.: Cited by Vail.

THE TREATMENT OF COMPRESSION FRACTURES OF THE DORSAL AND LUMBAR SPINE

By HOWARD A. SWART, M. D., F. A. C. S.,
Charleston, West Virginia

It is common knowledge that compression fractures of the dorsal and lumbar spine treated by conventional methods result in a high degree of disability in many cases. Many laboring men who suffer this type of injury are never able afterward to carry out their duties.

Following is the description of a method of reduction of compression fractures which in my hands, has resulted in the shortening of the time off work and in reducing the degree of ultimate disability.

First, the roentgenograms are carefully studied for evidence of fracture through the neural arch. This is a very important point, for if the fracture line runs through the neural arch the method of treatment is changed. In this type of fracture, support to the spine in hyperextension is necessary during the reduction and application of the cast. If patients with fracture through the neural arch are suspended between tables, it is possible that one part of the spine might slip forward on the other, thus pressing on the cord.

Patients with cord damage producing partial or complete hemiplegia do not do well following reduction methods and have been excluded from this series.

Reduction is never attempted on the day the patient enters the hospital. No attempt at hyperextension is carried out then, the patient being merely placed on a bed equipped with fracture boards. If there is no contra-indication, reduction is carried out the next day or two days later. This may or may not be the reason but no cast was ever removed because of paralytic ileus or vomiting during the eight year period in which I treated compression fractures of the spine in the Charleston General Hospital.

Simple compression fractures without cord damage or without evidence of fracture through the neural arch, are treated in the manner described as follows:

The patient is first anesthetized (with gas or ether) on a carrier. Stockinet is applied from the upper portion of the chest to the knees. A layer of heavy felt 6 inches wide is taped around the upper portion of the chest and a similar band of felt is placed around the pelvis at the level of the iliac crest. Smaller pieces of felt are placed around the lower portions of the thighs, above the knees.

Pillows are placed on the edges of the carrier and a fracture table (or another carrier) alongside. The patient is placed on his face so that he sags between the tables, his chest on one and his lower thighs on the other. It is necessary to have four assistants, one to hold each arm and leg. A cast is rapidly applied from the upper part of the chest to the knees. It is reenforced by two plaster-covered boards placed just above the knees.

It is not necessary to pound on the spine as excellent reduction is obtained by the body weight which produces a maximum of hyperextension. No fear need be entertained as regards too much hyperextension, as the anterior longitudinal ligament of the spine is very strong and will not give way (figure 1).

The patient may get blue as a result of pressure on the chest. However, if a gas machine is used more oxygen can be administered and the cyanosis dissipated. In cases in which drop ether is used, the operator lifts up on the patients chest to permit better breathing with the result that the cyanosis clears up.

(Fig. 1) showing patient in hyperextension cast for compression fracture 5th lumbar vertebra.

LIBRARY OF THE COLLEGE OF PHYSICIANS

When the cast has been applied, the patient is sent to bed on a curved gas pipe frame maintaining the curvature of the cast. Although at first sight the degree of hyperextension may seem frightening, the patients do well and I have never had to remove a cast for abdominal distention or ileus. The patient gets used to the cast in a few days. Lateral x-rays through plaster will, in practically all cases, show complete or practically complete reduction. In the upper dorsal spine restoration of the original width is seldom accomplished but in the lower dorsal and lumbar areas, where the great majority of compression fractures are found, the original width of the vertebral body can be restored.

The patient can go home in ten to fourteen days and usually gets along well. At the end of three months he returns and the cast is removed. I was agreeably surprised, in the first few cases treated in this manner, to find how few symptoms relative to the spine were present. The chief complaint usually is of stiffness of the hips, due to the prolonged period of hyperextension. However this usually disappears within a few weeks.

All patients in my series were given a Taylor back brace after removal of the casts but I am sure that many could have gotten along very well without it.

From 1939 to 1943, 39 patients were treated in the manner described. Among these, there were 72 compression fractures. The great majority of the patients were coal miners, the injuries being due to slate falls. It is interesting to note that as usual the greatest number of fractures occurred at the dorso-lumbar junction. Fifteen, or 20.8 per cent, occurred at the twelfth dorsel vertebra: 14, or 19.4 per cent, occurred at the first lumbar vertebra; 12, or 16.6 per cent, occurred at the second lumbar vertebra; 10, or 13.9 per cent, occurred at the eleventh dorsal vertebra; 4, or 5.5 per cent, occurred at the seventh and eighth dorsal vertebrae; 3, or 4.1 per cent, occurred at the third and fifth lumbar vertebrae. There were 2 fractures (2.7 per cent) at the fourth lumbar vertebra and 1, or 1.4 per cent, at the third, fourth, sixth, ninth and tenth dorsal vertebrae.

The ages of the patients ranged from 15 to 72 years. The average age was 37.9 years. Thirty-five of the patients were men and 4 were women.

DISCUSSION

In 1935, when the author first started to treat compression fractures of the spine, an attempt was made to follow the teachings of Bohler. The older methods of hyperextension on a Whitman or Rogers frame were given up because of the difficulty in getting patients to stay on the frame. Bohler advocated reduction by hyperextension, either by the use of Goldthwait irons or by suspension between tables as advocated by Watson-Jones. This was done without anesthesia and a cast was applied from the upper portion of the chest to the pelvis. By this means a fair degree of reduction of the fracture was obtained. The patient was then allowed to be up and about to exercise the muscles. In many cases, however, subsequent x-rays revealed that part of the reduction had been lost, thus increasing the disability because of the healing of the fracture in a compressed position. Such cases always give rise to prolonged disability due to a painful, weak back.

Reduction under anesthesia was found to produce a much greater degree of restoration of vertebral width, but the short cast failed to hold it. Then one leg was incorporated in plaster to the knee. This was an improvement, but some patients walked in these casts, and as a result the cast became loose before the end of the three month period. Only when both legs were included to the knees was reduction obtained and held for the requisite length of time.

It has been impossible to follow up the patients in this series as many were treated during the early part of World War II and have since been lost from sight. However, anyone who uses this method will be impressed by the excellent spines resulting from the extreme hyperextension position. The only untoward factor is the hip stiffness which, as previously stated, soon disappears.

The method is not to be used in cases of cord damage or fracture throught the neural arch.

A reasonably thorough search of the literature to date has failed to reveal any article dealing with this method.

It might seem that the prolonged recumbency would cause considerable atrophy of muscle and bone. One of the chief features of the Bohler treatment was that the patients exercised their muscles in the cast, and so prevented atrophy. However, in this series, very little trouble was encountered afterward from muscular weakness. The degree of pain experienced because of resultant muscle and bone atrophy was far less than that suffered in cases of incomplete reduction of the compression fractures. The pain in the latter cases persisted over many years. In patients treated by the method outlined, there has been very little back pain after the first few weeks.

BOXING AND INTRACRANIAL INJURIES

By JOSEPH D. ROMINO, M. D.,
Fairmont, W. Va.

Thus far West Virginia's record regarding serious boxing injuries or fatalities has been good. However, there is still much to be done in working out a more definite method by which a fighter may be judged fit for the strenuous sport of boxing.

With the present increase in ring accidents throughout the country, sooner or later the medical profession is going to be asked to have the final say as to whether a boxer may fight or not.

Closer study of participants must be made in order to determine the fitness factor, and with this in mind, I am presenting some observations as a starter toward that goal. The cases presented here are few in number, but even from these some definite basic findings are noted.

The statistics were obtained from fighters who partcipated in an amateur boxing show at Fairmont, presented by the Greater Fairmont Sports Association. The conditions under which they fought were identical. A thorough physical examination was made before the fight, and immediately after the fight the blood pressure was again taken and recorded.

The results are shown in the following chart:

Case Number	*Age*	*BP Before*	*BP After*
1	16	120/90	178/70
2	19	133/98	206/70
3	18	154/90	160/90
4	16	152/100	158/100
5	19	138/82	166/110
6	20	128/100	164/100
7	18	120/70	116/60
8	18	134/90	150/74
9	18	138/86	158/55
10	19	148/90	206/60
11	16	122/82	178/76
12	20	152/90	158/70
13	21	152/90	180/64
14	19	140/98	190/90
15	17	152/96	190/70
16	17	156/60	158/90

From the above chart the following facts will be noted:

1. In all but one case the systolic pressure was elevated.

2. In 75% of the cases the diastolic pressure of participants dropped.

3. In three cases the diastolic pressure was elevated and in one it remained the same.

4. All of the pre-fight pressures were above average for the age group of the participants. This may be due to pre-fight tension and excitement.

5. The circulatory system is taxed to a great extent during a fight.

None of these fights lasted more than three rounds, but one can reasonably assume in matches of longer duration, the change in the blood pressure would be even more marked and the fighter's chances for intracranial injuries increase proportionately.

My suggestions for better and safer boxing in West Virginia are these:

1. Boxers, whether amateur or professionals, should be licensed. Before a license is granted, he should undergo a complete physical examination, including a Kahn test, urinalysis, blood count, etc. This license should be renewed each year.

2. A boxer should have a medical record of each fight and present this to the commissioner at the time of renewal of his license. The license should also be shown the doctor before each fight.

3. A careful physical examination must be made before each fight.

4. A fighter who has been knocked out should not be permitted to fight for three months.

5. No fighter whose blood pressure is more than twenty points above normal for his age group should be permitted to fight because, in addition to the danger of serious intracranial injuries, I can't help but believe that fighters whose blood pressures are elevated receive, in the course of a bout, numerous petechial hemorrhages which sooner or later result in a "punch drunk has-been."

6. Each fighter should present the doctor with a signed affidavit from his manager, stating that he has undergone sufficient training for his fight.

7. The managers should see that their boxers are evenly matched, both as to weight and size, as an oversized boy can do more damage than one who is overweight.

West Virginia can easily show the way to the nation by being the first to adopt a set of standards that must be met by boxers before they are permitted to fight. However, many more statistics must be obtained before any definite conclusions can be drawn and these can only be obtained through cooperation of the physician and the promoter of the sport.

The President's Page

With deep humility, and with full realization of all of my limitations, I have accepted the responsibilities that are attached to the office of President. To assure a successful year, it is necessary to have the cooperation of every member of the Association. This I hope I may have.

To follow in the footsteps of Tom Bess, a man who has given his time, his energy, his very all to the duties of the office, makes the task a little easier. All of our members owe him a debt of deep gratitude.

This will be one of the most important years in the history of our organization. Many of our activities have already been planned by key committees, foremost among which is our legislative program, which has been presented in detail to each member. Briefly it is as follows:

1. The erection of a basic science building, and the establishment at Charleston of a four-year medical and dental school of West Virginia University at an estimated cost of $2,500,000; and, the construction of (a) a state-owned hospital for diagnosis, treatment of chronic diseases, and rehabilitation services which may be used for teaching and clinical purposes in connection with the school, and (b) a school of nursing. The cost of the hospital and school is estimated at $3,800,000.

2. The reorganization of the State Department of Health to include an extension of the merit system, and the placing of all services and institutions dealing with the care of the sick under a non-political board to be known as the state board of health.

3. The biennial registration of doctors.

The part of the program that requires action by the Board of Public Works will have been presented by January 1, 1949. Enabling legislation must be introduced in the legislature, which convenes on January 12. To achieve success for this important legislative program, it is necessary that we concentrate our efforts and follow through on the work that has already been done. Thomas Bess and his key committees have carried the program to the five yard line. It is up to us to push it over the goal line. Let's go!

I wish all of the members of the State Medical Association a happy and prosperous New Year.

Thomas G. Reed.

President.

West Virginia Medical Journal

Official Journal of
The West Virginia State Medical Association
302 Atlas Building, Charleston, West Virginia

Editor

Walter E. Vest, M. D. (1951) ..... Huntington

Managing Editor

Mr. Charles Lively ..... Charleston

Associate Editors

W. M. Sheppe, M. D. (1949) ..... Wheeling
Edward J. Van Liere, M. D. (1950) ..... Morgantown
G. G. Irwin, M. D. (1952) ..... Charleston
R. H. Edwards, M. D. (1953) ..... Welch

Editor Emeritus

James R. Bloss, M. D. ..... Huntington

Business Manager

Mr. Charles Lively ..... Charleston

Published monthly on the first day of the month, at Charleston, by The West Virginia State Medical Association.

Original articles are accepted on condition that they are contributed exclusively to the Journal.

Advertising rates furnished upon request. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the American Medical Association.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston 24, West Virginia. Telephone, Capitol 34-625.

THE NEW PRESIDENT

Tom Reed takes office January 1 as the 82nd president of the West Virginia State Medical Association. He succeeds Tom Bess, who becomes chairman of the Council. Wade H. St. Clair, the present chairman, will serve during 1949 as councillor-at-large.

The State Medical Association is most fortunate to have these three doctors as leaders during the coming year. There are many important matters which must have our earnest consideration, and sound leadership is most essential in these days when danger signals are flashing from Washington.

Drs. St. Clair and Bess have already demonstrated their capacity for the kind of leadership that is required. Tom Reed has had the best kind of training for the office of president. His four years' service as a member of the Council have well fitted him for the job.

We join with all of the members of the Association in thanking these doctors for their wise counsel and untiring service in behalf of organized medicine. We again congratulate Tom Reed upon his elevation to the presidency. We pledge him our full support and wish for him continued success in the conduct of the affairs of his office.

OUR PRESSING PROBLEM

Progress in American medicine is an achievement which we, as doctors, are proud to relate to the general public. However, for some time now, many stories reaching lay readers have dealt with isolated cases of distress, indicting the medical profession, along with articles based on glib promises of social planners.

During the ensuing year, the medical profession must concentrate its efforts on one problem: to tell the American people about the many contributions which the medical profession has made to the alleviation of disease, the preservation of life, and the postponement of death. Our story must stress the importance of our present system of voluntary care and present the true facts about medical care and health protection.

The House of Delegates of the American Medical Association, at the Interim Session in St. Louis, fully recognized these problems by creating a means for carrying on a nationwide health education program. To finance this program an assessment of $25 was made on each member of the American Medical Association. Members of the American Medical Association do not pay dues to the national organization. If they desire to become Fellows of the Scientific Assembly, they make application and pay $12 a year dues which include a subscription to The Journal. This barely pays for the paper and printing, notwithstanding the fact that the doctor receives the best medical periodical published anywhere in the world.

In 1947, the expenses of the Association exceeded income. For that reason dues of Fellows were raised from $8 to $12. However, even higher costs have kept apace with this raise and the Association may show a net loss for 1948.

The medical profession as a whole is practically unanimous in the opinion that government control of medicine would lower the standards of medical care in the United States, and is so sincere in this belief that it feels everything possible should be done to prevent such control being thrust upon us.

A coordinating committee has been formed to help solve many of the problems which we face, and it is enlisting the support of every physician. This committee is composed of Dr. E. L. Henderson, chairman, Dr. Edward S. Hamilton, Dr. Gunnar Gundersen, Dr. Walter B. Martin, Dr. Louis H. Bauer, Dr. John W. Cline, Dr. William Bates, Dr. R. B. Robins, Dr. R. L. Sensenich, and Dr. George F. Lull.

We have information to the effect that a bill providing for compulsory sickness insurance will be introduced in the Congress almost immediately after the next session convenes. It is imperative therefore that the West Virginia doctors bestir themselves and not only support the Coordinating Committee of the A. M. A., but impress upon our senators and representatives in Congress the necessity for rejecting this socialistic scheme which cannot but result here in the disastrous lowering of the standards of medical care which has occurred elsewhere in those countries which have adopted compulsory sickness insurance. Behold the maelstrom in which British medical care finds itself today!

THE LEGISLATIVE PROGRAM

As this issue of The Journal goes to press, the special committee on four-year school of medicine and dentistry is making preparations to appear before the board of public works in support of requested appropriations for the construction of such a school, together with a state hospital for diagnosis, treatment of chronic diseases, and rehabilitation services.

Probably not within the history of either the State Medical Association or the Dental Society, and certainly not in modern times, have any committees been called upon to complete during a few months the work that has been necessary in support of this important program. There have been many meetings, and the members of committees have given generously of their time since the legislative program was formally adopted by the Council several months ago.

If the board of public works approves the program for the proposed four-year school, the matter will then be before the legislature for final consideration. We sincerely hope that efforts of the key committees of both medical and dental organizations will meet with success so that this state may join with other states in beginning a new era in medical education.

The reorganization of the state health department is another matter that is of prime interest and concern to our members. Increased appropriations must be provided if we are to provide our people with not only a modern, but an adequate public health service. We also hope that the reorganization bill that will be introduced early in the session, and the increased appropriations necessary to carry on this important work, will receive favorable consideration in both branches of the legislature.

INDEPENDENCE AT STAKE

The Jefferson Republican, commenting on the proposed compulsory health insurance law and its "sinister menace" to the people of this country, says that "the ulterior motives of the prime sponsors are concealed."

Reporting the provisions in the "health bill" before the last Congress, The Republican states that the bill (S.1320), if enacted, would force on the American people a free medical, dental, nursing, hospitalization service.

"On the basis of all experience," says The Republican, "it would destroy our system of health care that has placed this country in the position of world leadership in the healing arts. It would rob members of the health professions of their independence, self respect and incentives for progress. It is estimated that the ultimate cost would approach $20,000,000,000 annually. It would entail an administrative bureaucracy that could become the key instrument in the seizure of tyrannical power.

DOCTORS AND DENTISTS

The Wheeling Intelligencer joins Dr. Thomas Bess, President of the State Medical Association, in the hope that the Legislature will make some provision for a Four-Year School of Medicine and Dentistry. This Wheeling paper also feels that something should be done generally to see that "educational dollars" are not wasted, but used where they will do the most good.

The Intelligencer's editorial is so timely that we reproduce it in its entirety:

> In a current issue of The West Virginia Medical Journal, a publication of the West Virginia State Medical Association, the President, Dr. Thomas Bess, hails the prospect of establishing a four-year school of medicine and dentistry for West Virginia University. Concerning this program, recently endorsed by the State Medical Association, Doctor Bess writes:
>
> "I know that the young people of this state who in the future will want to study medicine and/or dentistry will look upon the action of the West Virginia State Medical Association with a feeling of thankfulness and security. They in time may be a grateful group who will return to our rural areas and provide our people with the complete medical care and health service we are so anxious to give."
>
> We share profoundly in the hopes expressed by Doctor Bess. West Virginia has lagged too long in the field of the public's health. We have some of the finest doctors and surgeons in the world, but all of them were educated at other universities, and some doubtless were lost to our state because of that fact.
>
> Now U. S. public health laws are in being, and others doubtless are yet to come. While we do not favor the so-called socialization of medicine, we nevertheless realize there is a sense of urgency in such projects as the proposed medical college for West Virginia. It is a pity so many millions of

educational dollars are wasted on lesser or subordinate institutions, while our university's needs are neglected.

Undoubtedly the next legislature will be responsive to public desires in enlarging next year's appropriation's for the University. Whether at Morgantown or elsewhere, these facilities are sorely needed. We can all be certain of this one thing:

The boys and girls of West Virginia are going to demand that there be provided, within their own state, educational facilities second to none in the nation.

That, we believe, is a basic right of these fine young boys and girls. Those who oppose it for the sake of selfish pecuniary gain are, in our opinion, taking a very erroneous course. While it is a pity we get so comparatively little educational value for the millions already spent, owing to horse-and-buggy diversification and scatterment of our educational facilities, we face a condition and not a theory. The state of West Virginia cannot afford anything less than one of the finest universities in our land, unless the state expects to commit educational and social suicide.

And while we are looking into the future it must be insisted with greater effect than ever that the school facilities for our Negro citizens, who are highly valued as most worthy patriots, be fully equal to those afforded any other group of citizens. Any other course is a reflection upon our intelligence.

SUBSTANDARD MEDICINE

A distinguished American physician recently observed, at first hand, what is happening to medical practice in England under the Labor Government's act giving everyone "free" service.

The act, he points out, did not create a single extra doctor, nurse, hospital bed or any other facility. But the demand for the allegedly "free" service has been enormous. Doctors must see an average of 100 patients a day. As a consequence he says, "This overloading has made it necessary for the physician to shy away from the chronically ill, the aged, the children, the pre-tubercular, and the borderline mental case is filling his panel. The vast amount of unnecessary medical care is crowding out the very group that the plan was touted as serving."

Finally, he found that the quality of practice is declining in other ways as well. Service which the American people regard as routine—such as obstetrical and dental anesthesia—are not considered necessary and are not covered by the act.

What makes these expert observations particularly important is that plans now being urged for compulsory government health insurance in this country have a great deal in common with England's experiment. And, should they pass, there is no reason on earth to believe that the result would be different here. Government-controlled medicine is substandard medicine, no matter where it is tried.—Randolph Enterprise.

General News

NEW OFFICERS OF STATE MEDICAL ASSOCIATION ASSUME DUTIES JAN. 1

The new officers of the West Virginia State Medical Association, elected at the annual meeting of the House of Delegates at Huntington in May, 1948, will assume their duties the first of January.

Dr. Thomas G. Reed, of Charleston, will succeed Dr. Thomas Bess, of Keyser, as President, and the latter will serve as chairman of the Council during the ensuing year. Dr. Wade H. St. Clair, who has been chairman during 1948, will serve as Councillor-at-large, succeeding Dr. Andrew E. Amick, of Lewisburg.

Thos. G. Reed, M D.

Dr. W. Fred Richmond, secretary of the Raleigh County Medical Society, and Dr. J. C. Huffman, of Buckhannon, take office as first and second vice presidents, respectively, succeeding Dr. Spencer L. Bivens, of Charleston, and Dr. Harold Van Hoose, of Man.

Dr. T. Maxfield Barber, of Charleston, begins his twenty-second consecutive term as treasurer of the Association. He was first elected at the 59th annual meeting in Morgantown, in 1926.

New Councillors

The new Councillors are as follows: First district, Dr. L. Rush Lambert, Fairmont; second district, Dr. M. H. Porterfield, Martinsburg (reelected); third district, Dr. George F. Evans, Clarksburg; fourth district, Dr. A. R. Sidell, Williamstown (reelected); fifth district, Dr. E. L.

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

Gage, Bluefield; and sixth district, Dr. Russell Kessel, Charleston.

With the exception of Drs. Porterfield and Sidell, the hold-over members of the Council are: First district, Russell B. Bailey, Wheeling; third district, E. H. Hunter, Webster Springs; fourth district, James S. Klumpp, Huntington; fifth district, J. C. Lawson, Williamson; and sixth district, D. C. Ashton, Beckley.

HEART ASSOCIATION PLANS CAMPAIGN

The executive committee of the West Virginia Heart Association, at a meeting held in Charleston, December 12, voted full participation in the American Heart Association's nation-wide campaign for funds, scheduled for the month of February, 1949.

Besides agreeing upon a goal for the state campaign, the committee outlined a program for the coming years and took preliminary steps to obtain a state charter as a nonprofit corporation.

The State Heart Association has ben accepted as an affiliate of the American Heart Association. Membership in the state group is open to lay members approved by the board of directors.

All members of the West Virginia State Medical Association are eligible for membership, and application should be filed with Dr. W. Fred Richmond, secretary, Beckley.

The expanded executive committee is composed of Dr. W. A. Thornhill, Jr., Mr. Harry Brawley, Dr. W. C. Stewart and Mr. Ray Evans, Charleston; Dr. Francis J. Gaydosh, Mr. Lee C. Paull, Dr. H. R. Sauder and Mrs. Lawrence Meharg, Wheeling; Dr. Fred R. Whittlesey and Mr. Ward D. Stone, Morgantown; Dr. J. H. Wolverton, Jr., Piedmont; Dr. W. C. Swann, Mr. Burt L. Wilson, Mr. Wilbur E. Lunger and Dr. J. E. Stone, Huntington; Mr. L. Wade Coberly and Dr. R. J. Condry, Elkins; Dr. Frank J. Holroyd and Mr. Dewey A. Bailey, Princeton; Dr. R. H. Wharton and Mr. Charles Ludy, Parkersburg; and Dr. W. Fred Richmond and Mr. Ted McDowell, Beckley.

A. M. A. MEETING IN FEBRUARY

The American Medical Association has announced four meetings which will be held early in February.

The 45th Annual Congress on Medical Education and Licensure is scheduled for February 7-8; the Fourth Annual Conference on Rural Health, February 4-5; the Annual meeting of the National Conference on Medical Service, February 6; and a meeting of the Advisory Board of Medical Specialists, February 6. All of the scheduled meetings will be held at the Palmer House.

WEST VIRGINIA DOCTORS ACCEPT COMMISSIONS

Two West Virginia doctors have accepted commissions as lieutenant (j.g.) in the Medical Corps Reserve of the U. S. Navy and have reported for duty. They are Dr. James M. Sinnett, of Spencer, and Dr. Guy D. Niswander, of Coopers' Rock.

DR. THOMAS G. REED NAMES PERSONNEL OF ASSOCIATION COMMITTEES FOR 1949

Members of standing and special committees for 1949 have been named by Dr. Thomas G. Reed, of Charleston, who will assume his duties as president of the West Virginia State Medical Association on January 1.

Dr. Russell C. Bond, of Wheeling, continues as head of the committee on Child Welfare. Dr. W. E. Hoffman, of Charleston, will head the committee on Maternal Welfare. Members of these two committees were elected at the annual meeting of the House of Delegates at Huntington last May. They are as follows:

Child Welfare: Henrietta L. Marquis, Charleston; Raymond Sloan, Huntington; Carl E. Johnson, Morgantown; Harlow Connell, Bluefield; A. A. Shawkey, Charleston; and Theresa O. Snaith, Weston.

Maternal Welfare: Elizabeth McFetridge, Shepherdstown; Carl S. Bickel, Wheeling; E. F. Heiskell, Morgantown; J. E. Page, Clarksburg; E. J. Humphrey, Huntington; H. G. Steele, Bluefield; and M. B. Williams, Wheeling.

The Scientific Work committee was named by Doctor Reed shortly after being named president elect. The committee is composed of Dr. Paul H. Revercomb, of Charleston, Chairman; Drs. J. F. Barker, Huntington, and Carl E. Johnson, Morgantown.

The members of the Publication committee are elected by the Council. This committee is composed of Dr. Walter E. Vest, Huntington, Chairman; and Drs. E. J. Van Liere, Morgantown; Wm. M. Sheppe, Wheeling; G. G. Irwin, Charleston; and R. H. Edwards, Welch.

Standing Committees

The following is a complete list of members of other standing committees appointed by Doctor Reed:

Cancer: Russell B. Bailey, Wheeling, Chairman; M. L. Hobbs, Morgantown; E. W. Squire, Charleston; C. B. Wright, Huntington; Thomas L. Harris, Parkersburg; and Thomas Bess, Keyser.

Revision of Constitution and By-Laws: S. S. Hall, Clarksburg, Chairman; R. J. Reed, Jr., Wheeling; R. H. Edwards, Welch; H. L. Hegner, Wellsburg; and C. Y. Moser, Kingwood.

D. P. A. Advisory: Hugh A. Bailey, Charleston, Chairman; H. M. Escue, Charleston; and T. Kerr Laird, Montgomery.

Fact Finding and Planning: D. A. MacGregor, Wheeling, Chairman; W. E. Brewer, Logan; R. K. Buford, Charleston; A. E. Amick, Lewisburg; E. A. Trinkle, Weston; A. W. Armentrout, Martinsburg; and W. H. St. Clair, Jr., Bluefield.

Industrial Health: J. L. Patterson, Logan, Chairman; G. W. Easley, Williamson; J. L. Thompson, Weirton; H. M. Brown, Charleston; C. W. Stallard, Montgomery; and W. F. Rogers, Parkersburg.

Legislation: Frank V. Langfitt, Clarksburg, Chairman; Russell Kessel, Charleston; James S. Klumpp, Huntington; W. P. Black, Charleston; Ward Wylie, Mullens; and James L. Wade, Parkersburg.

Medical Education: Hu C. Myers, Philippi, Chairman; Bert Bradford, Jr., Charleston; Elizabeth McFetridge, Shepherdstown; E. J. Van Liere, Morgantown; Jack T. Gocke, Clarksburg; and Clark Kessel, Beckley.

Necrology: Harry G. Steele, Bluefield, Chairman; J. C. Peck, Moundsville; W. L. Van Sant, Hinton; James McClung, Richwood; A. Poole, West Union; and E. V. McElfresh, Pt. Pleasant.

Publicity: Frank J. Holroyd, Princeton, Chairman; Athey R. Lutz, Parkersburg; Walter R. Wilkinson, Huntington; R. D. Gill, Wheeling; and R. J. Condry, Elkins.

Syphilis: C. A. Hoffman, Huntington, Chairman; Hunter Boggs, Charleston; N. H. Dyer, Charleston; John F. McCuskey, Clarksburg; and Richard Corbitt, Parkersburg.

Conservation of Vision and Hearing: John H. Trotter, Morgantown, Chairman; J. S. Maxwell, Fairmont; T. R. Whitaker, Weirton; John B. Haley, Charleston; H. C. Hays, Williamson; and Dorsey Ketchum, Huntington.

Special Committees

Diabetes: Wm. M. Sheppe, Wheeling, Chairman; Fred Whittlesey, Morgantown; Wm. A. Thornhill, Jr., Charleston; L. R. Lambert, Fairmont; Geo. P. Heffner, Charleston; and D. C. Ashton, Beckley.

Mental Hygiene: E. F. Reaser, Huntington, Chairman; W. B. Rossman, Charleston; J. L. Knapp, Weston; A. L. Wanner, Wheeling; N. H. Dyer, Charleston; E. L. Gage, Bluefield; and O. N. Morison, Charleston.

Permanent Home: H. H. Howell, Madison, Chairman; Harold Van Hoose, Man; Paul P. Warden, Grafton; W. A. McMillan, Charleston; Philip Johnson, Fairmont; and J. A. Striebich, Moundsville.

Rural Health: Tyler R. Boling, Grantsville, Chairman; J. C. Eakle, Sutton; W. P. Warden, Charles Town; M. H. Maxwell, Moorefield; and T. B. Gordon, New Martinsville.

Tuberculosis: George F. Evans, Clarksburg, Chairman; W. L. Cooke, Charleston; G. R. Maxwell, Morgantown; W. P. Bittinger, Summerlee; and Marguerite Stemmermann, Huntington.

Veterans Board of Review: Claude B. Smith, Charleston, Chairman; James R. Brown, Huntington; and Ralph J. Jones, Charleston.

ACAD. OPH. AND OTOL. TO MEET IN SPRING

The regular meeting of the West Virginia Academy of Ophthalmology and Otolaryngology will be held at Martinsburg, May 13-14, 1949. The complete program for the meeting will be announced in a few weeks by the chairman of the scientific committee.

An effort is being made to arrange a joint meeting with the Virginia Academy for the spring of 1950, to be held either at The Greenbrier, White Sulphur Springs, or The Homestead, at Hot Springs, Virginia.

At the meeting of the West Virginia Academy, held at White Sulphur Springs, in September 1948, honorary membership was conferred upon Dr. Oscar B. Nugent, of Chicago, and Dr. James A. Moore, chief of otolaryngology, at the New York Hospital, in New York City.

At the fall meeting, Dr. John H. Trotter of Morgantown, won the first leg on the golf trophy presented for competition by Dr. E. C. Hartman, of Parkersburg, in memory of the late Dr. J. Hallock Moore, of Huntington, first president of the Academy. The trophy will constitute the annual prize until some member wins the championship at three separate annual meetings.

PHC MEETS JANUARY 3-5, 1949

The mid-winter meeting of the public health council will be held at the Daniel Boone Hotel in Charleston, January 3-5, 1949, for the purpose of examining applicants to practice medicine in West Virginia.

A. M. A. SPONSORS FIRST NATIONAL PUBLIC RELATIONS CONFERENCE

The first national public relations conference sponsored by the American Medical Association was a success in that it drew together at a single meeting representatives of medical societies from all over the United States who sought and found a common ground upon which to stand in this type of work in their various communities.

In his remarks addressed to the more than 300 persons present at the opening session in St. Louis, November 27, Lawrence W. Rember, executive assistant to Dr. George F. Lull, secretary and general manager of the American Medical Association, said that medical public relations is a job for all of us to do. "It is a job for every individual doctor in the United States. It would be a fine thing if more uniform and common denominator objectives could be agreed upon by every state."

Federal Control or Volunteer System

At this same meeting Dr. Claude Robinson, of Princeton, New Jersey, president of the Opinion Research Corporation, told the delegates that the problems of the medical profession at this time are (a) care of the sick, and (b) organization.

The speaker pointed out that unless the pressing economic problem now facing the people of this country is solved satisfactorily, doctors may not have the opportunity to practice medicine the way they wish,—with freedom, and with personal initiative.

"We have competition in the profession, one doctor against another," he said. "Social systems compete for followers. Today we are faced with a more extensive competition, government control against the volunteer system. If you want to be successful in competition, you must do a better job of selling than your competitor. This applies just as much to the medical profession as to any other profession or business or political party."

Doctor Robinson stated that forty per cent of our people are covered by some form of medical care insurance, and expressed the opinion that this is one of the big things that has held off support for federal control.

AMA Public Relations

Speaking at the same meeting, Dr. Elmer Henderson, of Louisville, chairman of the Board of Trustees, said that the American Medical Association last year spent more than $370,000 on public relations through the various committees and bureaus of the organization.

Doctor Roscoe L. Sensenich, president of the American Medical Association, in an address before the assembly, said that the doctor who is not interested in conveying to the public an interpretation of our interest in this fighting against socialized medicine, and what it means to us, is obviously doing a disservice to the public.

The success of the conference was due largely to the untiring efforts of the committee arranging the affair, consisting of Mr. Rember, and John Bach, and William F. Doscher, of the AMA public relations office.

ORGANIZE CHAPTER OF AMERICAN ACADEMY OF GENERAL PRACTICE

A West Virginia Chapter of the American Academy of General Practice was organized at a meeting held at Charleston, on November 30. The 17 charter members present elected the following officers for 1949:

President, Dr. Tyler R. Boling, Grantsville; vice president, Dr. Ralph Frazier, Grantsville; secretary, Dr. Carl B. Hall, Charleston; board of directors, Drs. Edwin A. Davis, J. Paul Aliff, and T. Maxfield Barber, of Charleston.

Drs. I. E. Buff and B. V. Blagg, of Charleston, were named as delegates to the Congress of Delegates of the American Academy of General Practice, which is scheduled to meet in Cincinnati, March 7-9, 1949. Dr. Charles N. Slater, of Clarksburg, and Dr. James Repass, of Lumberport, were named as alternates.

The Charleston Chapter is the 32nd state chapter to be organized as an affiliate of the American Academy.

One of the principal aims of the new organization, as expressed in the by-laws, is to counteract the unhealthy trend of overspecialization in the medical field and "to make better general practitioners who, through self-improvement, can command the respect of the public and a place of esteem in the profession."

The newly organized group will undertake to promote and maintain high standards in general practice of medicine and surgery, and encourage and assist young men and women who are preparing themselves to enter the field of general practice. An effort will be made to provide postgraduate study for general practitioners.

VITAL STATISTICS REPORT

It is now apparent that the prediction of the division of vital statistics of the state department of health of a decline in the State's 1948 birth rate will not materialize.

The cumulative birth rate for the first 10 months of this year is but five per cent less than the rate for the corresponding months of 1947. The rate so far this year is 27.2 per 1,000 population as compared with 28.7 for the first 10 months of last year.

The cumulative infant death statistics for the first 10 months of this year continue to be unfavorable. The death rate of 41.7 per 1,000 live births is considerable higher than the rate of 36.9 for the January-October period last year.

DR. WM. R. LAIRD HONORED

Dr. William R. Laird, head of Laird Memorial Hospital at Montgomery, alumnus of Washington and Lee University, has been notified that he will be "tapped" by Omicron Delta Kappa at the national honorary leadership fraternity's annual exercises at the University. Doctor Laird was a member of the class of 1910.

No state can progress without a good health program. To achieve this objective the cooperation of the medical, dental, nursing, engineering, teaching, and allied professions, with the aid of the press and radio, is necessary.—Edgar H. Greene, M. D., in J. Med. Assn., Georgia.

NATIONAL MEDICAL PROBLEMS AIRED AT SECRETARIES-EDITORS MEETING

Speaking before the annual conference of state medical association secretaries and editors at St. Louis, November 28-29, Dr. James C. Sargent, of Milwaukee, chairman of the American Medical Association's Council on National Emergency Medical Service, warned that a draft of doctors is inevitable unless there is a marked increase in volunteers for the medical corps of the armed forces.

The speaker said that 2150 medical officers will be lost to the Army during the first eight months of 1949, when there will be a sharp increase in Army personnel.

"More doctors are going into uniform in the months ahead," he said. "If we are to be true to our heritage, the movement must be voluntary." The speaker stated that medical service in the armed forces must be reorganized to make better use of available personnel. He strongly recommended that medical officers be given more authority. "Final judgment in matters affecting the health of fighting personnel," he said, "remains subject to the whims of an officer of the line."

Close Liaison Needed

Dr. Edward J. McCormick, of Toledo, Ohio, a member of the A. M. A. Board of Trustees, said that there should be a close liaison between the parent organization and state medical societies.

"Every doctor in America," he said, "should be willing to get in there and pitch. I have heard it said repeatedly that there are no more than 1600 doctors in this country who are willing to do any work and spend any of their own time to thwart socialized medicine, and this in the light of the fact that there are more than 150,000 doctors practicing in this country."

"We should not be expected to wait longer for something to happen," he said, "but should be willing to do something, all of us, about the critical situation in Washington and throughout the country."

Dr. Dwight H. Murray, of San Francisco, also a member of the Board of Trustees, stated that as a result of the election the practice of every doctor in America might be said to be in jeopardy. He said that he believed that an effort will be made in Washington and in various states to regiment medicine, and predicted that several bills aimed at the medical profession will be introduced at the forthcoming session of Congress.

Existence of Professions at Stake

Forrest A. Harness, of Indiana, member of the House of Representatives from the Fifth District, stated that there are now enrolled in medical schools in this country only 1,500 more students than in 1940. This is accounted for by reason of the fact that the schools as at present constituted cannot admit more students.

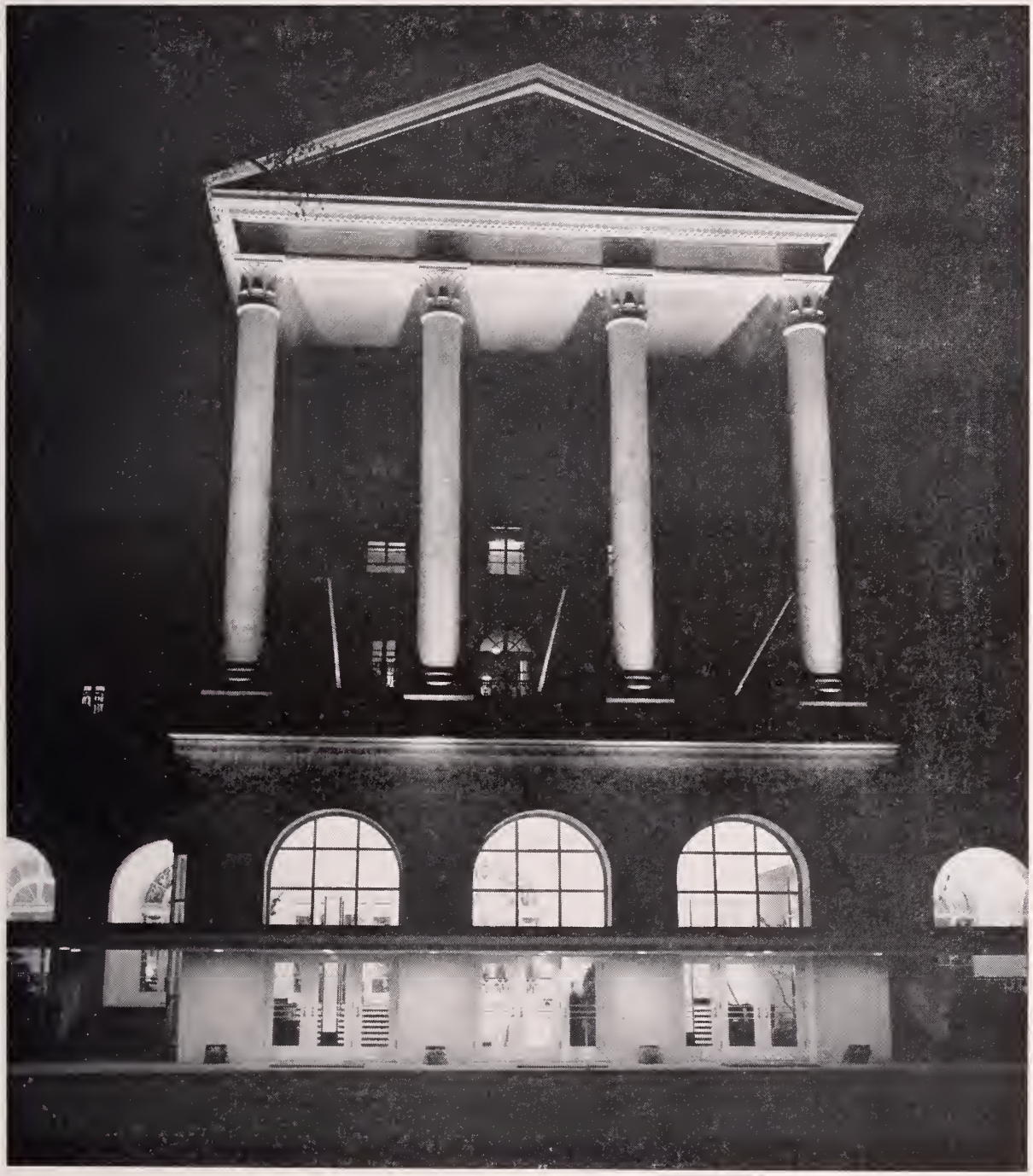
(One of the major projects of the West Virginia State Medical Association is the expansion of the present two-year school of medicine at West Virginia University into a four-year school of medicine and dentistry.)

Representative Harness also said that there were only 1,000 more nurses and 2,000 more hospital beds than we had in 1940.

"Unless we find a solution for this problem of adequate medical care and hospital service," he said, "the government is going to do it for us. The medical profession faces an alarming situation. The preventives we have so far provided have failed to halt the inroads of socialized medicine. The medical profession faces the necessity of 'rolling up its sleeves' and going to work on the street corners. If medicine continues as in the past, the profession will be forced to practice medicine as a bureau in Washington directs.

"What I have said might apply equally to all professions. We must come to grips with the forces that threaten the very existence of all professions in this country. There is nothing in the present picture to warrant optimism. This is a fight we cannot abandon, one that we must not lose."

"The history of medicine in this nation is little short of miraculous. I expect to be in the vanguard as we fight to restore and preserve this precious heritage."



Night view of the main entrance to the Greenbrier, where the 82nd annual meeting of the West Virginia State Medical Association will be held August 4-6, 1949.

SOCIALIZED MEDICINE TARGET OF A.M.A. NATIONWIDE EDUCATIONAL CAMPAIGN

The interim session of the House of Delegates of the American Medical Association convened November 30 at the Kiel Auditorium, in St. Louis. Dr. Walter E. Vest, of Huntington, and Dr. Ivan Fawcett, of Wheeling, were in their seats as delegates of West Virginia.

Doctor Vest served as chairman of the Committee on Miscellaneous Business, and Doctor Fawcett as a member of the Committee on Rules and Order of Business.

Merger of Service Plans

One of the more important matters considered by the House concerned the proposed national insurance company for voluntary prepaid medical service and hospital care, the basis for which would be the merger of all Blue Cross and Blue Shield plans.

(Some of the component societies of the West Virginia State Medical Association have gone on record as being opposed to the merger, as well as to the establishment of the proposed national insurance company to compete with commercial companies offering medical and hospital service.)

The argument of those proposing the merger was that existing local insurance plans are losing subscribers to commercial insurance companies because large industries want standardized benefits and methods of operation. Opponents strongly denounced the proposal as a long step on the road to socialized medicine.

The House of Delegates rejected the proposal but adopted a substitute which provides for the formation of a national enrollment agency, by which the services of all existing approved medical and hospital service plans would be coordinated with a view to further development and reciprocity among plans.

Opposition to the merger was expressed by delegates from several states, and the vote to reject was unanimous.

Special Assessment

The need for an expanded and improved public relations program was debated at length, with several delegates recommending an all-out campaign by the American Medical Association against socialized medicine in any form.

The enactment of the so-called Truman health bill, which would set up a compulsory health insurance plan for the entire country, would, it was stated by several speakers, mean the beginning of the end of free medicine in America.

To provide means for conducting a nation-wide campaign in the press and on the radio, the House directed that a special assessment of $25.00 be levied for 1949 against all members. The vote was unanimous in favor of the assessment. The Board of Trustees was directed to formulate plans for collecting the assessment and conducting the nation-wide campaign against socialized medicine.

Television

The use of television enabled hundreds of doctors watching the video screen in Kiel Auditorium to view operations and follow demonstrations in St. Louis hospitals.

This is the second time television has been used by the American Medical Association, the first experiment being tried with success at the annual meeting in Chicago last June.

The programs which were televised daily were provided by St. Louis University School of Medicine and Washington University School of Medicine, and transmitted to the auditorium over closed circuits.

General Practitioner of the Year

The gold medal of the American Medical Association for exceptional service by a general practitioner was awarded to Dr. W. L. Pressly, of Due West, South Carolina. The presentation, made by Dr. R. L. Sensenich, the president, was followed by an address by Dr. Andrew C. Ivy, of Chicago.

Doctor Pressly, who is well known by West Virginia doctors who attend sessions of the Southern Medical Association, has been called "the father of public health" in the county where he practices. He has served as president of the South Carolina Medical Association, and was chairman of the section on general practice of the Southern Medical Association in 1943-44.

Gold Medal to Fr. Schwitalla

The Rev. Alphonse M. Schwitalla, S. J., dean of St. Louis University school of medicine, was given unusual recognition by the members of the House when he was presented with the first gold medal and certificate of appreciation ever awarded by the A. M. A. for public service by a non-medical man.

It is stated in the certificate that it is being presented to Father Schwitalla for "outstanding efforts for public welfare on a national level." The resolution providing for the award was introduced by Dr. Walter E. Vest, of Huntington, and unanimously adopted.

Father Schwitalla served for 20 years as president of the Catholic Hospital Association, resigning two years ago on account of ill health.

CHANGES IN SHD PERSONNEL

The following changes in state health department personnel have been announced by Dr. N. H. Dyer, state health commissioner:

Dr. John W. Yost, of Princeton, has been appointed full-time director of the Bluefield City Health Department. He has been serving as part-time health officer of Princeton, as well as venereal disease clinician. He succeeds Dr. Richard C. Neale, who has served on a part-time basis since the death, several months ago, of Dr. D. B. Lepper.

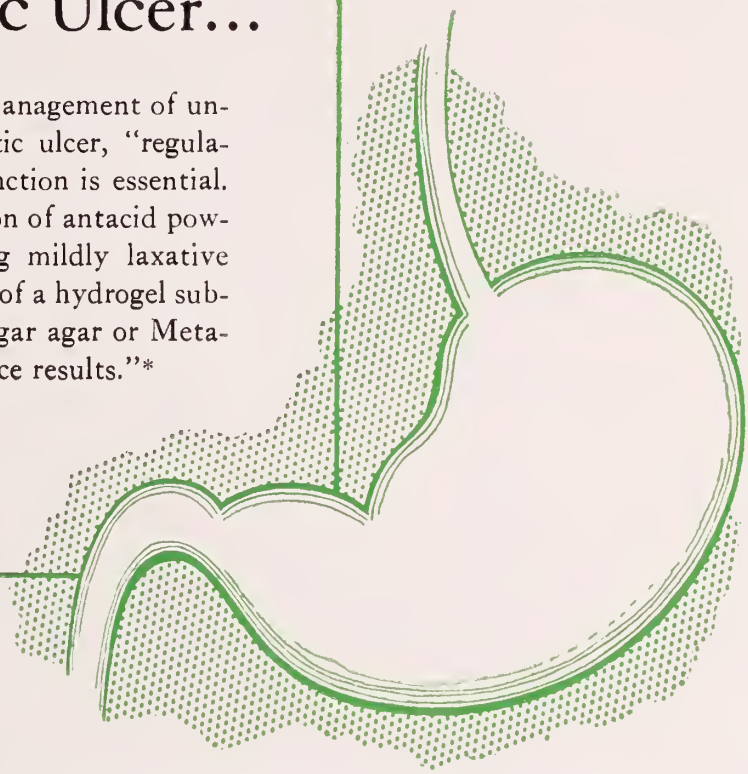
Dr. Joseph A. Markley, director of the bureau of hospitals and medical care, has resigned to engage in private practice. No successor has been appointed.

Dr. W. Philip Palmer, consultant in hospitals and medical care, has resigned to accept an appointment in connection with the United Mine Workers Health and Welfare Fund program in the Pittsburgh area.

Dr. Luke W. Frame, director of the bureau of communicable disease control, has assumed his new duties as director of the newly created Huntington-Cabell Health Department, at Huntington.

Bowel Regulation in Peptic Ulcer...

In the medical management of uncomplicated peptic ulcer, "regulation of bowel function is essential. . . . A combination of antacid powders . . . having mildly laxative effects or the use of a hydrogel substance, such as agar agar or Metamucil, will produce results."*



By furnishing a water-retaining, gelatinous residue in the large bowel, Metamucil acts gently without irritation to promote smooth, normal evacuation.

METAMUCIL®

is the highly refined mucilloid of Plantago ovata (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent.

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

SEARLE RESEARCH IN THE SERVICE OF MEDICINE

*Gerendasy, J.: Modern Treatment of Peptic Ulcer, J. M. Soc. New Jersey 43:84 (March) 1946.

RELOCATIONS

Dr. Ralph C. Greene, who was located at Terra Alta prior to World War II, and Memphis, Tennessee, after the war, has relocated at Martinsburg, where he is chief of the laboratory service and pathologist at the Newton D. Baker VA Center. He was certified by the American Board of Pathology in October, 1948.

* * * *

Dr. J. B. Medlock, of Beards Fork, is leaving January 1 to begin a residency in surgery at the VA Hospital at Aspinwall, Pa.

* * * *

Dr. John L. Clay, who has been associated with Dr. A. E. Glover at the Madison Clinic in that city for several months, has moved to Prenter, where he will continue in industrial practice.

* * * *

Dr. Wm. R. Ballard, of Prenter, has accepted a residency in surgery at the California Hospital, in Los Angeles. He will be in California until late in 1949.

* * * *

Dr. John H. Burke, of Elbert, has moved to Pageton, where he will continue in industrial practice.

* * * *

Dr. Curtis Artz, formerly of Grantsville and Parkersburg, who has been in the Medical Corps of the Army since July, 1948, is at present assigned to the station hospital at Fort Bragg, North Carolina, where he is serving as chief of the section on general surgery. He will remain there until next July, when he will be transferred to Brook General Hospital, at San Antonio, Texas, to serve a residency in surgery.

* * * *

Dr. James H. Gray, of Ward, will move to Belle, February 1, where he wil continue in industrial practice.

* * * *

Dr. Ralph H. Nestmann, of Indianapolis, has located at Charleston, where he will engage in the practice of his specialty of internal medicine, with offices at 1113 Quarrier Street.

* * * *

Dr. W. C. Covey, Jr., of Beckley, has returned to the University of Maryland School of Medicine to resume postgraduate studies.

CHANGE IN EENT FEE SCHEDULE

A change in the fee schedule for treatment by doctors engaged in EENT work was made by E. B. Pennybacker, State Compensation Commissioner, effective November 1, 1948. Under the new schedule, first call in office or hospital for examination and dressing is $4.00, and all subsequent calls $3.00 each. These changes do not interfere with any other part of the fee schedule now in effect.

ACP TO MEET IN NEW YORK CITY

The 30th annual meeting of the American College of Physicians will be held in New York City, March 27-April 1, 1949. The Waldorf has been designated as the headquarters hotel.

"GRASS ROOTS" CONFERENCE

The Fourth National Conference of County Medical Society Officers ("Grass Roots Conference") was held at the Jefferson Hotel in St. Louis, November 30, with more than 350 doctors in attendance. More than two hundred doctors were turned away because of inadequate seating arrangements. It was by far the most largely attended conference in the history of this potent professional group, which is sponsored by the American Medical Association.

Addresses on national preparedness and its relation to the doctor were presented by Rear Admiral Joel T. Boone (MC), USN, executive secretary of the committee on medical and hospital services of the armed forces; by Brig. Gen. George E. Armstrong, Deputy Surgeon General, Department of the Army; Norvin C. Kiefer, M. D., senior surgeon, Office of the Surgeon General, USPHS; and Richard L. Meiling, M. D., of Columbus, Ohio, chairman of the AMA Council on National Emergency Medical Service.

The subject of "The Public, The Doctor, and Socialized Medicine" was handled by Dr. Louis H. Bauer, of Hempstead, New York, secretary of the World Medical Association, and Dr. Maurice H. Friedman, of Washington.

The next conference will be held at the annual meeting of the American Medical Association in Atlantic City, June 6-10, 1949.

Dr. Frank J. Holroyd, of Princeton, area chairman for the second district, comprising several states, is a member of the committee which will arrange the program for the meeting at Atlantic City.

PUBLIC RELATIONS COUNCIL RETAINED

The San Francisco firm of Whitaker and Baxter has been retained by the American Medical Association as public relations counsel to direct "a broad program of public education." According to Dr. George F. Lull, Secretary and General Manager of the AMA, the firm will outline a campaign "to promote voluntary health insurance and alert the American people to the danger of a politically-controlled compulsory health system."

The employment of the San Francisco firm has been approved by a ten-member planning committee composed of Dr. Edwin S. Hamilton, Kankakee, Ill., Gunnar Gundersen, La Crosse, Wis., Walter B. Martin, Norfolk, Va., and Louis H. Bauer, Hempstead, N. Y., all members of the Board of Trustees; Drs. William Bates, Philadelphia, John W. Cline, San Francisco, and R. B. Robins, Camden, Arkansas, all members of the House of Delegates; President R. L. Sensenich, South Bend, Ind.; Chairman of the Board of Trustees Elmer L. Henderson, Louisville, Ky., and George F. Lull, Chicago, secretary-general manager of the A. M. A.

The Whitaker firm which has been engaged for the past fifteen years in the professional direction of campaigns on political and economic issues, has already done a great deal of organizational work on this new project, and the program for the nationwide educational program will be announced shortly after the first of January.

THE WOMAN'S AUXILIARY
TO THE
WEST VIRGINIA STATE MEDICAL ASSOCIATION
ROSTER OF MEMBERS
(By County Auxiliaries)
1949

BARBOUR-RANDOLPH-TUCKER

Mesdames:

Berkley, Julius L. — Elkins
Bush, A. Kyle — Philippi
Hanssmann, Irving J. — "
Johnston, C. E. — Parsons
King, Lewell S. — College Park, Ga.
Lea, Melvin E. — Philippi
Lenox, John E. — "
Leonard, Charles L. — Elkins
Lyon, Frank Kane — Parsons
Michael, Guy H. — "
Moyers, Emmet D. — Norton
Murphy, Franklin B. — Philippi
Myers, Junior W. — Glendale
Myers, Hu Crim — Philippi
Myers, Karl J. — "
Nefflen, Louis H. — Elkins
Sanner, J. E. — Crossett, Ark.
Seltz, Herman — Elkins
Snedegar, Paul D. — "
Townsend, Milford F. — Dailey
Whiteside, William E. — Belington
Woodford, James R. — Philippi
Woodford, Thomas L. — Belington

CABELL

Mesdames:

Amick, F. E. — Huntington
Baer, Thomas B. — "
Barker, J. Frank — "
Barrett, Robert S. — "
Beard, Harry E. — "
Beckner, William F. — "
Biern, Oscar B. — "
Bloss, James R. — "
Bobbitt, Ray M. — "
Booth, Frank M., Jr. — "
Boso, Clarence H. — "
Bourn, W. D. — Barboursville
Brandabur, J. J. — Huntington
Brandebury, H. A. — "
Brown, James R. — "
Burgess, Bess — "
Carr, Joel — "
Campbell, O. C. — Hamlin
Chambers, V. L. — Huntington
Chaboudy, Louis — "
Christian, Leo E. — "
Clay, Stafford — "
Cook, J. Russell — "
Curry, Raymond H. — Barboursville
Dobbs, L. F. — Huntington
Duncan, Charles — "
Esposito, Albert — "
Evans, Edward, Jr. — "
Flesher, George — "
Ford, J. C. — "
Gang, Lawrence — "
Gerlach, Earl B. — "
German, John D. — "
Guthrie, William — "
Hamilton, O. L. — "
Hayman, P. D. — "
Heckman, James A. — "
Hines, Norris — "
Hodges, F. C. — "
Hoffman, C. A. — "
Hoitash, F. J. — "
Humphrey, Edwin J. — "
Hunter, W. Byrd — "
Hutchison, Jay L. — "
Irons, W. E. — "
Kappes, W. Carl — "
Ketchum, Dorsey — "
Klumpp, James S. — "
Krimsky, Joseph — "
MacCracken, W. B. — "
Martin, W. B. — "
McClellan, G. O. — West Hamlin
McGehee, Melvin W. — Huntington
Morris, John F. — Huntington
Morrison, G. C. — "
Moore, L. J. — "
Moore, T. W. — "
Neal, W. E. — "
Parsons, Warren — "
Plymale, Clarence — "
Prichard, Carl P. — "
Polan, C. M. — "
Polan, Charles G. — "
Politano, Victor — Milton
Ratcliff, Gilbert — Huntington
Reaser, Edward F. — "
Reynolds, Charles O. — "
Richmond, Lewis C. — Milton
Rose, Edward E. — Huntington
Rutherford, A. G. — "
Shafer, E. E. — "
Smith, Wilson P. — "
Staats, Roydice — "
Stiles, Harlan — "
Stone, John — "
Swan, Walter — "
Taylor, I. Ewen — "
Terlizzi, C. L. — "
Thomas, M. J. — "
Thomas W. C. — "
Van Metre, R. Stuart — "
Vest, Walter E. — "
Walden, George — West Hamlin
Wayburn, Gates J. — Huntington
Weinstein, Stanley — "
Wilkinson, R. J. — "
Wright, Chauncey — "

Honorary Member:
Carter, Norvel — "

EASTERN PANHANDLE

Mesdames:

Aldis, Henry — Shepherdstown
Armentrout, A. W. — Martinsburg
Bitner, E. H. — "
Clapham, R. E. — "
Duff, James A. — "
Dunne, Thomas B. — Charles Town
Eagle, A. B. — Martinsburg
Glenn, Marshall — Charles Town
Glover, V. L. — Martinsburg
Guthrie, J. K. — "
Haltom, W. L. — "
Hendrix, N. B. — "
Kilmer, John H. — "
Martin, G. O. — "
Oates, Max O. — "
Oates, T. K. — "
Porterfield, M. H. — "
Power, C. G. — "
Shaw, D. J. — "
Sites, J. McKee — "
Sperow, Clifford — "
Sponseller, G. J. E. — "
Talbott, R. B. — "
Tonkin, H. G. — "
Van Metre, J. L. — Charles Town
Wallace, W. A. — Martinsburg
Zepp, E. Andrew — "

Honorary Member:
McFetridge, Eliz. M.D. — Shepherdstown

FAYETTE

Mesdames:

Bittinger, W. P. — Summerlee
Boone, Reese — Quinwood
Bundy, W. E., Jr. — Oak Hill
Carter, E. S. — Montgomery
Claiborne, Wm. L. — "
Dorsey, C. S. — Kingston
Dupuy, S. S. — Scarbro
Fordham, George — Montgomery
Frame, Eugene M. — Winona
Gordon, P. L. — Montgomery
Hogshead, Ralph — "
Hresan, M. G. — Fayetteville
Hughes, Carlisle — Montgomery
Jarrett, J. N. — Oak Hill
Jones, E. E., Jr. — Mt. Hope
Laird, T. K. — Montgomery
Moore, M. A. — "
Nolan, L. E. — Fairmont
Oden, P. W. — Oak Hill
Shirkey, M. C. — Montgomery
Simmons, Walter — "
Sims, Thomas C. — Fayetteville
Smith, G. A. — Montgomery
Stallard, C. W. — "
Thompson, J. B. — Oak Hill
Updike, R. A. — Montgomery
Watkins, C. E. — Oak Hill
Wiseman, Henry — Glen Ferris

HARRISON

Mesdames:

Allen, E. Ross — Clarksburg
Allman, W. H. — "
Carder, J. R. — "
Chandler, F. Carl — Bridgeport
Coffindaffer, R. S. — Shinnston
Corbin, J. E. — Clarksburg
Cruikshank, D. P. — Lumberport
Davis, W. M. — Bridgeport
Esker, H. H. — Clarksburg
Evans, G. F. — "
Ferrell, M. E. — "
Fisher, C. F. — "
Genin, F. G. — "
Gilman, Joseph — "
Gocke, J. T. — "
Gocke, T. V. — "
Gocke, W. T. — "
Greer, C. C. — "
Hall, S. S. — "
Hanifan, Richard K. — "
Haynes, H. H. — "
Humphries, Robt. T. — "
Jabaut, S. W. — Shinnston
Jackson, Kenna — Clarksburg
Jarvis, C. C. — "
Kemper, A. J. — Jane Lew
Kerr, J. C. — Clarksburg
Ladwig, O. W. — Wilsonburg
Langfitt, Frank V. — Clarksburg
Linger, R. B. — "
Lough, D. H. — "
Lynch, R. V. — "
Maloy, J. S. — Shinnston
McClung, J. R. — Bridgeport
McCuskey, John F. — Clarksburg
Mills, L. H. — "
Neal, L. E. — "
Nutter, R. B., Sr. — Enterprise
Nutter, R. J. — Clarksburg
Owens, W. T. — "
Page, J. E. — "
Ping, E. C. — "
Pletcher, R. O. — Jane Lew
Post, C. O. — Clarksburg
Ralston, James G. — "
Randolph, E. B. — "
Repass, J. C. — Lumberport
Rose, George W. — Clarksburg
Shore, Ernest L. — Salem
Slater, C. N. — Clarksburg
Spelsberg, W. W. — "
Stephenson, J. E. — "
Thomas, H. V. — "
Tucker, E. D. — Nutter Fort
Varner, H. V. — Clarksburg
Weaver, A. J. — "
Wilkinson, B. W. — "
Williams, Jesse F. — "
Williams, J. Frank, Jr. — "
Willis, C. A. — Bridgeport

Wilson, J. E. — Clarksburg
Wilson, J. E., Jr. — "
Wornal, L. S. — Shinnston
Wright, E. B. — Clarksburg
Zinn, Lynwood D. — "

Members at Large:

Davisson, C. R. — Weston
Huffman, J. C. — Buckhannon
Knapp, Joseph — Weston
Stroud, C. G. — Flemington
White, Robert — West Union

Associate Member:

Corder, O. E., Jr. — Clarksburg

KANAWHA

Mesdames:

Alift, J. Paul — Charleston
Anderson, Randolph L. — "
Angell, H. Webb — "
Baer, Robert E. — So. Charleston
Bachwitt, David — "
Bailey, Hugh A. — Charleston
Baldock, Harry E. — "
Banks, J. Bankhead — "
Barber, D. N. — "
Barber, Maxfield — "
Basman, Jack — "
Beddow, Herbert — "
Bivens, S. L. — "
Black, W. P. — "
Blagg, B. V. — So. Charleston
Blake, Thos. H. — St. Albans
Bobbitt, O. H. — Charleston
Bock, R. C. — "
Boggs, Hunter — "
Boiarsky, Julius — "
Bonar, M. L. — "
Bowyer, A. B. — "
Bradford, Bert, Jr — "
Brady, A. Spates, Jr. — "
Breisacher, Carl — "
Brick, John P. — "
Buford, R. K. — "
Cannaday, John E. — "
Champe, L. P. — "
Chandler, A. C. — "
Churchman, V. T., Jr. — "
Clark, F. A. — "
Condry, John — "
Cooke, W. L., Jr. — "
Cox, Lloyd E. — "
Dent, Duke A. — "
Dobbs, F. H. — "
Dunn, E. T., Jr. — "
Dyer, N. H. — "
Elkin, W. Paul — "
Ellison, A. B. C. — "
Escue, Henry — St. Albans
Fisher, H. H. — Dunbar
Frank, L. — Charleston
Glass, Henry — "
Glass, W. J., Jr. — "
Grace, J. E. — Cabin Creek
Gray, J. H. — Ward
Grisinger, Geo. F. — Charleston
Grisinger, Geo. F., Jr. — "
Grubb, George — "
Hall, Carl B. — "
Halloran, R. O. — "
Hamrick, R. S. — St. Albans
Hardesty, W. L. — Charleston
Hash, John W. — "
Heffner, George P. — "
Henson, E. B. — "
Hills, H. M., Jr. — "
Hoffman, W. E. — "
Hudgins, A. P. — "
Ireland, R. A. — "
Irwin, G. G. — "
Jarrett, John T. — "
Jarrett, L. A. — Dunbar
Jarrett, M. F. — Charleston
Jones, Ralph J. — "
Jordan, E. V. — "
Kessel, Ray — "
Kessel, Russell — "
Ketchum, R. D. — "
Koenigsburg, Max — "
Lambert, Florence — So. Charleston
Lance, V. L. — Charleston
Law, H. D. — "
Lewis, C. E. — "
Lilly, Goff P. — "
Lilly, J. P. — "
Litton, A. C. — "
Louft, R. R. — "
Lovejoy, U. C. — "
Lutz, John E. — "
Mace, V. E. — "
Mantz, T. P. — "
Marquis, Henrietta, M.D. — "
Matthews, L. B. — Charleston
McClue, A. E. — Dunbar
McClure, U G. — Charleston
McLaughlin, Ralph — "
McMillan, Owen — "
McMillan, W. A. — "
Mendeloff, M. I. — "
Mican, Harry — "
Miyakawa, George — "
Newhouse, Newman — "
O'Dell, R. N. — "
Palmer, Glenn — "
Pearcy, Thompson — "
Peck, Earl — "
Pence, R. E. — So. Charleston
Peters, J. T. — "
Peterson, V. L. — Charleston
Point, W. W. — "
Polsue, W. C. — "
Preiser, P. — "
Price, Robert B. — "
Putschar, Walter — "
Reed, T. G. — "
Reel, F. C. — "
Reeves, J. N. — "
Revercomb, Paul H. — "
Rice, Wm. R. — "
Robins, J. E. — "
Rohr, J. U. — Sweet Springs
Rossman, W. B. — Charleston
Rucker, J. E. — "
Seletz, A. A. — "
Selman, J. H. — "
Shamblen, E. L. — "
Shawkey, A. A. — "
Shirkey, W. F. — "
Skaff, Victor — "
Slaughter, Jas. F. — Dunbar
Souleyret, S. B. — East Bank
Soulsby, P. C. — St. Albans
Spencer, Tracy N. — So. Charleston
Squire, E. W. — Charleston
Staats, Chas. E. — "
Stanley, L. P. — "
Stephenson, E. B. — "
Stewart, Wm. C. — "
Summers, R. R. — "
Swart, Howard A. — "
Thompson, Hugh — "
Thornhill, W. A. — "
Tuckwiller, P. A. — "
Vaughan, E. O. — St. Albans
Vial, H. R. W. — So. Charleston
Walker, R. H. — Charleston
Watts, C. N. — "
Williamson, R. G. — Los Angeles, Calif.
Wilson, A. A. — Charleston
Wohlford, R. F. — So. Charleston
Woodall, R. E. — Charleston
Work, W. F. — "

LOGAN

Mesdames:

Brewer, Walter E. — Logan
Combes, L. G. — Holden
French, A. M. — Logan
Farley, W. F. — Holden
Jamison, Frank R. — Logan
Kruger, I. M. — "
Harris, B. C. — "
Lyons, J. W. — Holden
McClellan, W. T. — Stollings
Round, F. L. — Holden
Smith, B. D. — Amherstdale
Starcher, Everett H. — Logan
Steele, L. E. — "
Straughan, Joseph M. — Omar
Trippett, L. H. — Earling
VanHoose, Harold — Man
Watson, George N. — "

MARION

Mesdames:

Baron, Louis E. — Mannington
Barr, J. M. — Worthington
Bonnar, James M. — Fairmont
Bressler, David — "
Carter, Carl J. — "
Clinton, J. B. — "
Criss, H. L. — "
Evans, Geo. T. — Ida May
Frye, Robert R. — Mannington
Hamilton, D. D. — "
Haynes, O. L. — Fairmont
Helmick, John P. — "
Hickson, E. W. — "
Holland, Claude L. — "
Holland, Eugene A. — "
Johnson, H. R. — "
Johnson, Phillip — "
Jones, Harold R. — "
Keister, H. S. — "
Kinney, C. L. — Fairmont
Lambert, L. Rush — "
Lawson, W. T. — "
Norris, L. D. — "
Nunnally, W. O. — "
Offner, J. E. — "
Orr, W. W. — Rachel
Parks, Seigle W. — Fairmont
Ramage, C. M. — "
Rogers, Ford B. — "
Romino, J. D. — "
Sowers, F. F. — "
Spencer, Leon O. — "
Swisher, K. Y. — "
Trach, John M. — "
Trach, John Paul — "
Traugh, George H. — "
Tuckwiller, J. R. — "
VanHorn, K. L. — "
Welton, Wm. A. — "
Wise, Emery D. — "
Yost, Joe — "

Honorary Member:

Stephens, A. H. — Tarpon Springs, Fla

McDOWELL

Mesdames:

Anderson, J. H. — Welch
Bracey, A. H. — "
Burger, Ray — "
Camper, H. G. — "
Castrodale, Dante — "
Chapman, C. B. — "
Clark, C. T. — Iaeger
Coulon, N. F. — Thorpe
Counts, W. Ralph — Welch
Elliott, Boyce — Aransas Pass, Tex.
Evans, H. P. — Keystone
Gates, E. O. — Welch
Gibson, E. D. — Coalwood
Hall, W. C. — Welch
Hicks, C. F. — "
Linkous, O. E., Jr. — "
McKee, John S. — "
Milchin, Sam — Jenkinjones
Schiefelbein, H. T. — Welch
Shanklin, R. V. — Bluefield
Straub, G. L. — Welch
Vermillion, E. F. — "
Vick, C. W. — Jenkinjones
Villani, A. J. — Welch

MERCER

Mesdames:

Bird, Ben W., Jr. — Princeton
Blaydes, J. E. — Bluefield
Clements, B. S. — Princeton
Connell, H. R. — Bluefield
Davidson, S. G. — "
Fowlkes, R. H. — "
Fox, P. R. — "
Flynn, C. S. — "
Gage, E. L. — "
Gatherum, Robt. S., Jr. — "
Goodall, F. C. — Princeton
Higginbotham, Upshur — Bluefield
Holroyd, F. J. — Princeton
Horton, E. W. — Bluefield
Hughes, C. R. — "
Johnston, Cecil F. — "
Kechele, D. V. — "
Low, J. R. — Princeton
Markell, J. I. — "
Neale, R. C. — Bluefield
Pace, L. J. — Princeton
Peters, I. T. — "
Reynolds, C. J. — Bluefield
Rogers, R. O. — "
St. Clair, C. T., Jr. — "
St. Clair, W. H. — "
St. Clair, W. Hampton, Jr. — "
Scott, Charles M. — "
Scott, Charles M., Sr. — "
Shanklin, J. R. — "
Sinclair, M. W. — "
Slusher, W. C. — "
Steele, H. G. — "
Todd, G. L., Jr. — Cincinnati, O.
Todd, G. L. — Bluefield
Van Reenan, A. C. — "
Weier, Karl E. — "

OHIO

Mesdames:

Ackermann, W. E. — Wheeling
Armbrecht, George — "
Armbrecht, R. J. — "
Azar, Phillip — "
Bailey, R. B. — "

Bandi, Robert T. — Wheeling
Benson, Don — Moundsville
Bickel, C. S. — Wheeling
Bird, James D. — "
Bobes, S. S. — "
Boggs, Carroll — "
Bond, R. C. — "
Bradford, W. P. — Moundsville
Brown, Geo. H. — Wheeling
Buffington, C. B. — "
Carver, Gordon — "
Chamberlain, Robert — "
Clovis, C. H. — "
Clubb, E. M. — McMechen
Cope, Paul — Wheeling
Danenberg, David — "
DelVecchio, J. J. — "
Drinkard, R. U. — "
Drinkard, R. U., Jr. — "
Fawcett, Allen — "
Fawcett, Ivan — "
Gaydosh, Francis — "
Gaydosh, M., Jr. — "
Gilmore, J. W. — "
Glass, Earl — "
Greeneltch, D. E. — "
Haislip, N. L. — "
Harpfer, Harold — "
Hazlett, J. C. — "
Hegner, Herman L. — Wellsburg
Hershey, C. D. — Wheeling
Hiles, C. H. — "
Holley, C. J. — Bridgeport, O.
Huffschmidt, J. R. — Wheeling
Jones, A. L. — "
Kalbfleisch, Wm. K. — "
Klug, T. M. — "
Leslie, Warren — "
Little, H. G. — "
Lyon, L. A. — "
MacGregor, D. A. — "
McClure, W. T. — "
McCoy, Arley V. — "
McCuskey, W. C. — "
Maskrey, F. R. — "
Meier, John S. — "
Niehaus, A. J. — "
Osterman, A. L. — "
Otte, Ray — Wellsburg
Pell, Edward N. — Power
Perilman, Wm. — Wheeling
Phillips, Earl S. — "
Phillips, Edward M. — "
Phillips, Edward S. — "
Phillips, R. W. W. — "
Purpura, A. J. — "
Quimby, W. A. — "
Reed, Robert J. — "
Schmidt, A. R. — "
Sheppe, W. M. — "
Sonneborn, Robert M. — "
Spargo, James — "
Stewart, James K. — "
Strobel, G. E. — "
Tomassene, R. A. — "
Vieweg, Geo. L. — "
Wanner, A. L. — "
Webb, W. S. — "
Weiler, H. G. — "
Yoho, S. F. — Benwood

POTOMAC VALLEY

Mesdames:

Berry, P. E. — Piedmont
Bess, Robert — "
Bess, Thomas — Keyser
Coffman, Harry — "
Coffman, Robert — "
Courrier, E. A. — "
Flick, William A. — "
Huffman, Thad T. — "
Love, R. W. — Moorefield
Maxwell, M. H. — "
Reynolds, Orlando S. — Franklin
Wilson, Paul R. — Piedmont
Wolverton, Jas. H. — Piedmont
Wolverton, Jas. H., Jr. — "

RALEIGH

Mesdames:

Ashton, D. C. — Beckley
Banks, Fitzhugh Lee — "
Banks, McRae — "
Bowles, Alvin G. — "
Broaddus, R. G. — "
Chambers, R. W. — "
Coram, James Mose — "
Covey, William — "
Cunningham, George R. — Tams
Cunningham, W. H. — Beckley
Daniel, Doff D. — "
Daniel, Ross P. — "
DuPuy, E. S. — "
DuPuy, S. S. — Scarbro
Edwards, Hugh S. — Beckley
Ford, Scott A. — "
Garrett, Thomas — Sprague
Halloran, Linville M. — Beckley
Harkleroad, Frank S. — "
Harvey, Harold — "
Hedrick, E. H. — "
Hedrick, Grover C., Jr. — "
Hedrick, John — "
Houser, Lynwood G. — "
Jarrell, Dennis — "
Johnson, George W. — McAlpin
Kessel, Clark — Beckley
Lilly, Wallace — "
Mays, William — "
McKenzie, John Ernest — "
Moran, William G. — Cranberry
Newman, Ross E. — Beckley
Peter, Beverly K. — "
Ralsten, M. Murrill — "
Rardin, W. H. — "
Richmond, Buelah B. — "
Richmond, Fred — "
Riley, William M. — Whitby
Shaffer, Hubert A. — Beckley
Sato, Sam — Slab Fork
Smith, Clyde W. — Beckley
Shrewsbury, Lewis E. — "
Tieche, Albert U. — "
Vermillion, Thomas U. — "
Whitlock, J. W. — Affinity
Wray, Everett B. — Stotesbury
Wriston, Robert — Beckley

WOOD COUNTY

Mesdames:

Adams, W. A. — Parkersburg
Asch, J. T. — "
Barker, Oliver D. — "
Bateman, George — Williamstown
Batten, James C. — Parkersburg
Biddle, Robert M. — "
Blair, F. Lloyd — "
Blair, Holmes — "
Boice, R. H. — "
Boyers, Charles — "
Bronaugh, Wayne — "
Brundage, O. H. — "
Casto, O. J. — "
Conley, Orva — "
Connolly, Randall — "
Corbitt, Richard W. — "
Crooks, Edwin W. — "
Davis, Robt. E. — "
Davis, W. W. — "
Dearman, A. Morgan — "
Dick, Wm. S. — "
England, Welch — "
Fankhauser, Robt. K. — "
Fosnaugh, Robt. P. — "
Gaynor, H. E. — "
Gilmore, Milton — "
Goff, S. Wm. — "
Goff, W. R. — "
Goodhand, Charles L. — "
Hamilton, Richard — St. Marys
Harris, T. L. — Parkersburg
Hartman, E. C. — "
Holmes, E. B. — "
Hovis, Logan — "
Jones, A. M. — "
Jones, L. P. — Pennsboro
Judy, W. J. — Parkersburg
Lattimer, R. D. — "
Lincicome, Robert C. — "
Lutz, Athey R. — "
McCuskey, Paul — "
Moore, Dana T. — "
Nicholson, Berlin B. — "
Potter, Fred J. — "
Prickett, D. C. — "
Quillen, O. L. — St. Marys
Robinson, B. O. — Parkersburg
Rogers, Watson F. — "
Santer, M. A. — "
Sheridan, Richard — "
Sidell, A. R. — Williamstown
Stark, Jack J — Belpre (O.)
Ulch, H. W. — Parkersburg
Veon, H. H. — "
Wade, James L. — "
Wharton, Ray H. — "
Widmeyer, Robert S. — "
Wise, S. D. H. — "
Woofter, Andrew C. — "
Yeager, Wm. R. — "

Honorary Members:

Miller, Roy Ben — Parkersburg
Prunty, S. M. — "

MEMBERS-AT-LARGE

Mesdames:

Amick, A. E. — Lewisburg
Arnett, J. C. — Rowlesburg
Ashworth, Glenn — Morgantown
Benson, Don S. — Moundsville
Brown, C. L. — Pt. Pleasant
Cooper, O. O. — Feather Falls (Cal.)
Deeds, L. W. — Buckhannon
Dent, Charles F. — Morgantown
Ferrell, A. D. — Ronceverte
Fisher, Earl — Gassaway
Forman, Worth — Buckhannon
Fortney, F. D. — Beckley
Gunning, H. D. — Ronceverte
Hall, J. E. — Newell
Hegner, H. L. — Wellsburg
Hunter, E. H. — Webster Springs
Jackson, C. C. — East Rainelle
Johnson, J. H. — Stone (Ky.)
Justice, E. L. — Weirton
Khorozian, K. G. — Pineville
King, W. E. — Morgantown
Lanham, A. G. — Ronceverte
Lawless, J. J. — Morgantown
Lawson, A. F. — Weston
Lawson, J. C. — Williamson
Leef, J. L. — Richwood
Lewis, A. C., R.N. — Seth
McClure, T. R. — Marlinton
McNeer, B. W. — Hinton
McNeer, F. L. — Hinton
Millman, T. H. — Anjean
Page, B. L. — Buckhannon
Ritter, D. W. — Hinton
Salkin, David — Hopemont
Smith, Charles E. — Terra Alta
Smith, H. A. — Madison
Smith, W. T. — Glenville
Stalnaker, Guy — Glenville
Strader, H. B. — White Sulphur Spgs.
Stokes, J. W. — Hinton
Thompson, J. L. — Weirton
White, S. R. — Bruceton Mills
Wilkinson, D. D. — Wyco
Zinn, R. H. — Hundred
Zsoldos, F. J. — Glen Rogers

Obituaries

CHARLES PERRY BURKE, M. D.

Dr. Charles Perry Burke, 72, of Eastgulf, died at his home in that city September 24, 1948.

Doctor Burke received his academic education at Waynesburg College and his M. D. degree in 1911 from Jefferson Medical College, Philadelphia. He served as first lieutenant in the Army Medical Corps during World War I. He was formerly located at Thomas, and at Medora, Illinois.

Doctor Burke was a former member of the Barbour-Randolph-Tucker Medical Society, the West Virginia State Medical Association and the American Medical Association.

MEDICAL MSS.
Advice and aid in preparation of scientific papers for publication. Editing.
Lillian McGurl
Box 1702 Charleston 26, West Va.
Phones: Off. 35-681 — Res. 25-579
REFERENCES

EUSTACE THOMAS GOFF, M. D.

Dr. Eustace Thomas Goff, 62, of Parkersburg, died at his home in that city November 22, 1948, following a heart attack. Death was unexpected.

Doctor Goff, whose specialty was diseases of the chest, was born at Hazel Green, West Virginia. He received his academic training at West Virginia University and graduated from the Medical College of Virginia in 1913. After engaging in practice at Smithville and Clarksburg, he moved to Parkersburg in 1922, where he remained in active practice until his death.

Doctor Goff was a member of the Academy of Medicine of Parkersburg, the West Virginia State Medical Association, and the American Medical Assoation.

* * * *

LUTHER ENOCH ROBERTS, M. D.

Dr. Luther Enoch Roberts, 75, died December 15, 1948, at his home in Rosedale, Gilmer County, following a heart attack. He had practiced in his home county since his graduation from the University of Louisville School of Medicine in 1907.

* * * *

CLAUDE NELSON RUCKER, M. D.

Dr. Claude Nelson Rucker, 68, of Marytown, died at his home in that city November 29, 1948, following a cerebral hemorrhage.

Doctor Rucker was born in Bedford County, Virginia. He received his academic training at Washington

DESIGNED FOR MODERN PRACTICES . .

RITTER MULTI-PURPOSE
TABLE MODEL A
TYPE 1

The Ritter Multi-Purpose Table and unusual operating ease and flexibility—provides complete patient comfort. Motor elevated, rapid, smooth adjustment to any position from full horizontal to Chair position. Rotates 180° — raises or lowers 40½" to 23½" from top of table to floor.

MOTOR ELEVATED
PROVIDES EXTREMELY HIGH AND LOW POSITIONS
FOR ALL EXAMINATIONS AND TREATMENTS

POWERS & ANDERSON
W. Va. Representative
E. G. Johnson, Norrows, Va.
2 South Fifth St.
Richmond, Virginia

THE WEST VIRGINIA MEDICAL JOURNAL

302 ATLAS BUILDING, CHARLESTON, W. VA.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Editor
WALTER E. VEST, M. D.
955 Fourth Ave.
Huntington, W. Va.

Managing Editor and
Business Manager
MR. CHARLES LIVELY
Box 1031
Charleston 24, W. Va.

Associate Editors:
EDWARD J. VAN LIERE, M. D.
Morgantown, W. Va.
W. M. SHEPPE, M. D.
Wheeling, W. Va.
G. G. IRWIN, M. D.
Charleston, W. Va.
R. H. EDWARDS, M. D.
Welch, W. Va.

JAMES R. BLOSS, M. D., Editor Emeritus, Huntington

Vol. XLV FEBRUARY, 1949 No. 2

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

MULTILOCULAR, CHYLOUS CYST OF THE GREATER OMENTUM*

Its Occurrence in a Three Year Old Child

By R. H. EWARDS, M. D., and A. J. VILLANI, M. D., Welch, W. Va.

There are great differences of opinion with regard to the origin and significance of omental cysts and indeed comparatively few of the reported cases have been studied with sufficient care to permit a definite determination of their point of origin and mode of formation. From a review of the literature it seems that omental cysts are rare and have been less frequently reported than all other cysts of the abdomen. The first case was reported by Gardner[1] in 1852, a cystic lymphangioma in a woman who died unexpectedly. Schwarzenberger,[2] in 1894, reported a case of multiloculated cyst of the omentum discovered at operation in which there was clear fluid of specific gravity 1.016. Horgan[3] noted 37 cases of omental cysts in children in a review of the literature up to 1935. The rarity of the condition in childhood can be seen from the following reports: three cases in the extensive surgical experience of the Children's Hospital of Boston; three cases in thirty years' experience of the Mayo Clinic; two cases in 23 years' experience of the Jewish Hospital of Brooklyn.[4] In 1911, Stillman[5] reported that there had been 22 cases of serous cysts of the omentum, including one case of multiple cystic lymphangioma of the omentum. According to his tabulation of the 22 cases, 9 occurred at the ages of 1 to 4 inclusive, 6 occurred from 5 to 11, and the remaining 7 were adults. Sixteen were females and six were males.

Several theories have been advanced as to the etiology of these growths. Jacobi[6] believes that most of these cysts have their origin in the lymphatic vessels of the omentum. Hasbrouck[7] believes most of them to be endotheliomata and disbelieves that many have a congenital origin. Wakefield[8] believes most of them to be lymphangiomata. Trauma as an exciting factor is emphasized by the history given in the case reports by Piechaud, Gooding, Oberlin and Chalier, but they represent only 4 per cent of cases.[9] Nearly all observers believe some of the cysts to be embryonal in origin, claiming that we have embryonal rests here as well as in any other part of the body. The embryonal theory is advanced mostly from the fact that these cysts usually occur in childhood, 50 per cent occurring before the age of 10 and 65 per cent occurring before the age of 21. Rokitansky[10] ventured to make the assertion that all omental cysts were of lymphatic origin, terming them as dilated lymphatic vessels or dilated lymph nodes.

During life, large omental cysts may simulate a loculated tuberculous peritonitis or an ovarian cyst. Other conditions that must be considered in the diagnosis are lipomata, mesenteric and pancreatic cysts, aortic aneurysms and enlarged cysts of the spleen. The typical structure of these cysts consists of a fibromuscular wall, often lined with a layer of endothelium and containing clear fluid. They may be found free of adjacent structures in the peritoneal cavity, developing in the potential spaces between the leaves of the

*Presented before the combined staffs of Bluefield Sanitarium, Stevens Clinic Hospital, and Clinch Valley Clinic, at Welch, W. Va., Aug. 11, 1948.

greater omentum. They vary greatly in size and may be single or multiple. The symptomatology varies greatly as would be suspected according to the size and location of the cysts.

Because of the rarity of the condition, diagnosis is difficult and very few cases are diagnosed before operation. According to Horgan, the symptoms are caused by pressure, tortion and traction, and he lists them as nausea, vomiting, anorexia, constipation, diarrhea, pain, dysuria and frequent micturition. There are some cysts that cause no symptoms. Some cases may first be noted because of the increase in the size of the abdomen which has in some cases reached tremendous proportions before causing any symptoms. As stated before, because the symptomatology is influenced by the size, location and contiguity of various abdominal structures, the diagnosis of omental cyst is rarely made. The differential diagnosis includes the consideration of ascites, ovarian cysts, tuberculosus peritonitis, mesenteric cysts, gallbladder disease, affections of the stomach, liver or kidneys, pancreatic cysts, neoplastic or parasitic lesions and primary or metastatic malignancy. Surgical removal of these tumors should be done as the growths are usually benign and do not recur.

CASE REPORT

J. F., a 3 year old white male, was seen by us with a history of apparently being well and active until the morning of July 17, 1946, when he complained of pain about the neck and shoulders associated with fever. The mother became concerned about his condition and brought him to the hospital for examination. At this time she stated that she had noticed the child's abdomen to be unusually large and that the neighbors had commented frequently about this enlargement. There was no history of nausea or vomiting but there was a history of a tendency to constipation and the mother stated that the child had been given a laxative with resulting loose stool.

The patient was an adopted child and had been in good health until the onset of the present complaint. At the age of 11 months a left herniorrhaphy for congenital herna was done according to the Bassini technic. He had an uncomplicated postoperative convalesence.

Physical examination.—The rectal temperature was 101.2 F., the weight 34 pounds. Of special note was the size of the abdomen and in the course of the adbominal examination, the mother stated that she had been concerned about this enlargement for some time and that she was anxious to know what could be done. On palpation, the abdomen was soft and tended to have a somewhat doughy feeling with apparently no tenderness. There was definite dullness to percussion of the lower half of the abdomen. The upper third of the abdomen was definitely tympanitic on percussion. A well healed right hernial scar was present. Physical examination otherwise was essentially normal.

The urine specimen was normal. The blood count showed red cells, 3,560,000; white cells 11,050; hemoglobin content 72 per cent. The differential count showed 70 per cent polymorphonuclear cells; 25 per cent small lymphocytes and 5 per cent eosinophiles. Patch tuberculin test was negative. Blood serology was negative. Due to the abdominal findings a tentative diagnosis of tuberculous peritonitis with ascites was made and the child was admitted to the hospital for paracentesis. On paracentesis 300 cc's. of serosanguinous fluid were withdrawn. Following this procedure the temperature became elevated to 104 F. The laboratory report on the fluid was serum cholesterol 190, total protein 7.0, albumin fraction 4.7, globulin fraction 2.3, and albumin globulin ratio 2.1:1. The specific gravity was 1.016 and the cell count was 1860 with a predominance of polymorphonuclear cells. The culture of the fluid was sterile and the tubercular smear and culture were negative. An x-ray of the chest and abdomen at this time revealed the pulmonic fields to be within the limits of normal and the heart silhouette to be normal with the abdomen nondiagnostic. A subsequent blood count showed: white cells 8,400; a differential count of 70 per cent polymorphonuclear cells, 29 per cent small lymphocytes and 1 per cent basophiles.

Because of the nature of the ascitic fluid it was decided to do an exploratory operation through a low midline incision under general anesthesia. When the peritoneum was opened, multiple thin-walled cystic messes were encountered involving the entire greater omentum. Some of the cysts were filled with clear serous fluid; others were filled with serosanguinous fluid and varied in size from 3½ cm. to about 6 to 8 cm. The entire greater omentum was resected. The organs in situ appeared to be normal. The appendix was not removed. The wound was closed without drainage, using chromic catgut after instilling 100 cc's. of normal saline solution into the peritoneal cavity. The skin was closed with continuous sutures of catgut.

The postoperative course was uneventful except for a rise of temperature to 102.4 F. im-

medately following the operation. The patient was discharged from the hospital August 3, 1946, asymptomatic, weighing 28 pounds, 9 ounces. He was again seen September 11, 1946 at which time his condition was satisfactory, the incision was well healed and his weight was 31 pounds.

Pathologic examination.—"The specimen consists of a mass of edematous omentum which, after fixation, weighs 660 grams. When incised it is found that the two layers of the omentum are separated, forming cystic cavities filled with watery fluid. There is one mass of omentum which is segmented from the remainder and it is on a pedicle and is twisted several times but still its does not appear gangrenous. The inner surfaces of these cysts are thrown up in corded trabeculations. Microscopically, the section shows thin layers of fat and connective tissue with some leukocytic infiltration. The cavities between the two layers of omentum are lined with a very delicate endothelial structure.

Diagnosis: "Chylous cyst of the omentum."

SUMMARY

A case of multilocular, chylous cyst of the greater omentum in a 3 year old boy is reported.

BIBLIOGRAPHY

1. Gardner: Tr. Path Soc. of London, 3:374, 1851-52.
2. Schwarzenberger: Ein Fall von Multilokularein Lymphkyston des Omentum majus Beitr. z. Klin. Chir., 11:713-727, 1894.
3. Horgan, Joseph: Cysts of the Omentum, Am. J. Surg. 29:343-353, Sept. 1935.
4. Litchfield and Dembo: Therapeutics of Infancy and Childhood, 2:1385.
5. Stillman: S. Lymphangiomata of the Omentum & Omental Cysts, J.A.M.A. 57:726, 1911.
6. Jacobi: J.A.M.A. 57:729.
7. Hasbrouck: Ann. Surg. 1908 cited by DaCosta, Modern Surg. ed. 10, Phila., Saunders, p. 876.
8. Wakefield, W.F.B.: Cystic Lymphangioma of the Gastro-colic Omentum, Surg, Gynec. & Obst. 5:-227, 1907.
9. Horgan, Joseph: 3 ibid.
10. Rokitansky: Tr. Assoc. Am. Phys. 16:232, 1901.

CONTROL BY STREPTOMYCIN

Streptomycin has proved to be valuable in the treatment of tuberculosis and should be tried before surgery, particularly if a tuberculous bronchiectasis existed before or continues after thoracoplasty. The drug has given excellent results in acute tuberculous bronchitis. It has also been valuable in controlling, and perhaps preventing, acute tuberculous empyema following resection.

Streptomycin can be introduced directly into the pleural cavity previous to obliteration by thoracoplasty. Streptomycin gives promise of controlling, for a time at least, early postoperative spreads.—Surgery, Gynecology and Obstetrics.

LYE BURNS OF THE ESOPHAGUS*

By WILBUR F. SHIRKEY, M. D.,
Charleston, W. Va.

Lye burns of the esophagus are all too frequent and almost invariably present to the otolaryngologist a problem which he hates to face, that is, the cure of that morbid condition, 'cicatricial atresia of the esophagus'. In the successful treatment of this lesion grim determination plays its part.

During the past five years there have been admitted to the hospital 30 cases of lye burns of the esophagus. Of these, 18 were cases in which lye had been ingested within three days of admission, and 12 were cases in which the atresia had developed before admission. Sixteen of the 30 patients were under ten years of age, 3 were under 20 years of age, and 11 were from age 20 to 65.

Before discussing the management of these cases, I shall comment briefly on the symptomatology, the diagnosis and some of the complications.

Symptomatology.—The symptoms of lye burns of the esophagus depend upon the amount and concentration of the lye swallowed. The patient at first experiences burning pain in the mouth and throat.

Vincent[1] states that in lye burns of the esophagus the mouth and throat are always involved causing a great deal of discomfort but that fever, dysphagia, pain, dehydration and starvation are the outstanding symptoms. Eventually in these cases there appear white corrosion marks on the tongue, lips and pharynx. Acute edema of the larynx may cause respiratory obstruction. Extreme salivation is present and very often vomiting, the vomitus at times being blood-tinged.

If the lesions of the esophageal wall are deep, there probably will be severe pain in the chest radiating to the back. Fever is present in many cases, also toxic symptoms with general weakness and exhaustion which may have a fatal ending.

Complications.—The severity of the esophageal lesion determines to a great extent the likelihood of complications. In deep seated lesions of the esophageal wall peri-esophagitis may develop, with perforation of the esophageal wall. Purulent esophagitis and, later, mediastinitis develop. In the latter condition the pleura at times becomes involved, with resultant purulent pleurisy. The pericardium may suffer a similar fate, leading to purulent pericarditis.

*Presented before the annual meeting of the West Virginia Academy of Ophthalmology and Otolaryngology, at White Sulphur Springs, September 20, 1948.

In one of my cases, perforation of the stomach and gangrene of the lung, with empyema, were observed. The patient, a 65 year old man, died three weeks after ingestion of the lye with suicidal intent. The case report follows.

CASE REPORT

Mr. J. F., aged 65, white, was admitted to the hospital with a history of having swallowed lye ten days previously. On examination it was noted that he was considerably emaciated and in a moribund condition. His chief complaint was dysphagia, with general exhaustion, pain in the abdomen and chest, and cough with expectoration of foul material.

The patient was given intravenous glucose, vitamins, amino acids and penicillin. On account of his serious condition, no attempt was made to pass a string down the esophagus or to perform a gastrostomy. His temperature varied from 101 F. to 103 F.

An x-ray examination of the chest showed a mass in the right base. Barium passed through the esophagus freely.

In spite of all supportive measures, the pain in the stomach and chest grew gradually more severe, the patient became weaker each day and death ensued ten days after admission.

Autopsy.—"Large perforation of the anterior wall in prepyloric portion of the stomach. Marked localized fibropurulent peritonitis in the left upper quadrant. Large ulcerations of mucosa in posterior wall of prepyloric area of the stomach. Edema of gastric mucosa.

"Gangrene lower lobe of right lung. Encapsulated empyema of right pleural cavity (about 1,000 cc. greenish pus). Marked hemorrhagic bronchitis and bronchiolitis, most advanced right lower lobe. Edema and congestion of aryepiglottic folds and laryngeal mucosa. Scarring of pyriform recesses of pharynx. Necrosis of large portions of esophageal epithelium. Marked anaemia and dehydration.

"The mucosa of the esophagus is fairly well preserved in the proximal and distal portions. Epithelium is missing in the midportion except for an occasional small island.

"Comment: Death was caused by peritonitis from perforation of the stomach some time after ingestion of lye. The perforation did not immediately follow the chemical necrosis. There is a large gangrenous cavity of the lung, apparently from aspiration."

Oftentimes the physician is lulled into a false sense of security in these cases because the patient, after the acute statge has passed, begins to swallow liquids and, later, solid food. He appears to be in excellent condition. However, the physician's sense of security is only a dream as evidences of esophageal atresia become manifest.

Diagnosis.—Opinions differ as to the most frequent location of the strictures. Abel[2] believes that simple stricture occurs more often but that in multiple strictures, the lower ones are the most severe. According to Jackson,[3] the most frequent location of the esophageal stricture following lye burns is at the physiologic and anatomic narrowings, that is, at the level of crossing of the left bronchus, next, at the cricopharyngeal junction and, finally, at the hiatal level.

In my cases I have found that the most frequent place of stricture is at the crossing of the left bronchus. In those cases in which multiple strictures were present, the most frequent points of stricture were in the cricopharyngeal region and at the left bronchus level. The diagnosis is not difficult to make but it may be difficult to determine how deep the corrosion extends, also the localization of the burns.

Since the localizations at the physiologic narrowings in the esophagus are most exposed to corrosive agents, it naturally follows that these areas are the most probable sites for the development of atresia. However, experiences of others apparently do not support this theory. Haslinger,[4] Leegaard[5] and McKinney[6] noted that scars at the cricopharyngeus are rare but more often occur between the mouth of the esophagus and the bifurcation of the trachea. In summing up, Leegaard observes that the lower half of the esophagus appears to be more frequently attacked than the upper. His experiments have shown that no special attraction for the physiologically narrow places appears to be indicated.

Treatment.—The proper treatment of acute lye burns of the esophagus is a subject which has met with much debate. In the final analysis, each case presents its individual problems calling for variations in treatment. The essential point is to begin treatment before scar formation occurs. It has become a general conception that a standard course should be followed in order to prevent atresia or other complications. This course is well described by Uhde[7] of the University of Oregon, in his comprehensive review of the literature on caustic burns of the esophagus and in his presentation and analysis of clinical findings in 64 cases of lye burns. (He includes other caustic chemicals, also). His treatment consists of the following measures:

1. Immediate neutralization of the lye.

2. Immediate passing of no. 0 twisted silk thread.

3. Treatment to avoid dehydration.

4. Fluoroscopic examination after the acute stage has passed and fever has subsided (usually in four to seven days).

5. Esophagoscopy to determine location and degree of burns.

After esophagoscopy he continues treatment after the methods of Salzer[8] and Bokay.[9]

Salzer,[8] in 1920, advocated a change in the treatment of corrosive injuries of the esophagus. The general principle of his regimen is carried out in many clinics although there are still differences of opinion as to when and how it should be done.

Salzer's method is to introduce a bougie filled with lead shot into the esophagus once a day, leaving it in place for five minutes the first day, ten minutes the second day, and so on, until it is left in place for thirty minutes. (If fever develops he discontinues the insertion for forty-eight hours). He then passes the shot-filled bougie every other day over a period of three or four weeks; he gradually increases the intervals until finally the bougie is passed once a week for two or three months. Eventually it is passed only once every six months.

According to Salzer, if a child is not taken to the hospital until the sixth day after the ingestion of lye, it is questionable whether or not early bouginage can be applied because of the danger of esophageal perforation and hemorrhage in the presence of possible ulceration and granulation of the esophageal wall.

Gellis and Holt [10] report a total of 110 children seen at the Harriet Lowe Home of Johns Hopkins Hospital with histories of lye ingestion. Seventy-one were seen shortly after ingestion of lye and 39 were seen after the stricture had developed. Those who were treated shortly after lye ingestion were treated by the method as outlined by Salzer. Of the children who were treated according to Salzer's method, stricture developed in only one. There were no accidents nor deaths in this group. Forty-three per cent of these children who were not treated had strictures.

Hanckel,[11] in discussing some of his observations with regard to the Salzer method of treatment, states that he uses this regimen in treating some of his old lye burn cases is which stricture has developed but has been dilated sufficiently by retrograde bouginage to permit passage of the mercury-filled bougie orally. By so doing, he states, one is able to close the gastrostomy and eliminate the necessity of having the patient swallow a string for each subsequent dilatation. He uses sizes 18 to 36 F. bougies and passes the bougie once a week for several months or even years.

Crowe[12] reports the results of his treatment of 13 cases of lye burns according to the 'Bokay prophylactic therapy'. In 9 cases no strictures developed; in 4 cases strictures developed owing to the failure of the patients' families to cooperate. The treatments at the home were not prolonged.

McHenry and Clay[13] stress the importance of having the patient swallow a thread so that dilatation can be carried out when necessary. If a thread cannot be swallowed they recommend early gastrostomy so that proper nutrition can be maintained and the retrograde method of dilatation begun. They consider this method the least dangerous.

Cody,[14] in a recent review of the technic employed in the treatment of extensive atresia of the esophagus due to lye burns at the University of Michigan Hospital, discusses the satisfying results. The Hurst (mercury-filled bougie) and the Bokay (bougie filled with lead shot) methods of treatment are used. This technic has proved successful. Doing away with the gastrostomy wound as early as possible and carrying out of dilatations by use of mercury-filled bougies is advised.

Many physicians advise esophagoscopy before any method of treatment is instituted. Others hold the belief that early esophagoscopy in an inflamed esophagus is a dangerous procedure and that a fatality may result from such instrumentation.

Vincent[15] feels that instrumentation is contraindicated in children with lye burns of the esophagus and that such procedure serves no useful purpose.

There are several methods of treatment of stricture of the esophagus: the mercury or shot-filled bougies, blind bouginage, esophagoscopy with direct bouginage, gastrostomy with a continuous string and retrograde dilatation, fluoroscopic bouginage, continuous indwelling tube and external esophagoscopy, to mention a few.

In my series of 30 cases, 18 were of recent lye ingestion (within three days). Immediate treatment was given, either by the home physician or in the emergency room of the hospital. Treat-

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

ment consisted of neutralization of the corrosive by vinegar given orally and followed by olive oil. After admission to the hospital the patients were examined to determine, if possible, the extent of the burns. They were placed on nourishing liquid diets. If only slight evidence of damage to the oral cavity was observed, they were discharged from the hospital and instructed to return if there was any sign of difficulty in swallowing. Of the 18, seven returned home within three days after admission. None of these patients returned with a stricture of the esophagus.

The remaining 11 patients of the 18, who showed evidence of more extensive burns, were kept in the hospital for more prolonged treatment. Of this number, four had ingested lye with suicidal intent and were more acutely ill than the others. The burns were more extensive and there was considerable vomiting of blood-stained material. All 11 patients were treated by an indwelling Levine tube. They were given the necessary intravenous fluids, vitamins, amino acids and, if fever developed, penicillin. The tube was left in continuously for four to five weeks, being changed from one side of the nose to the other every few days. The feeding of the children through the tube was under the direction of the pediatric service. Over a five-year period stricture did not develop in any of the 11 cases.

Within the past two months I have heard from eight of these patients, either directly or indirectly, and none of them has noted any evidence of difficulty in swallowing ordinary food. Some of them recently have had an x-ray examination to determine whether or not stricture was present. No stricture was noted in any of the cases so examined.

Several years ago I attempted to follow the Salzer method of treatment of lye burns of the esophagus but was disappointed because of the failure of the patients' families to cooperate since the distance between home and hospital was too great for the frequent return trips necessary for bouginage.

The greatest difficulty in this particular locality arises when dealing with those patients who live in the coal mining districts and who are hard to convince of the necessity of returning to the Clinic two or three times a week, or even once a week, for repeated dilatation. It was this difficulty which prompted me to resort to the indwelling Levine tube method just described, in an effort to successfully treat these unfortunate individuals. I have been well satisfied with my results so far.

The remaining 12 of the 30 cases in my series were patients in whom stricture had developed before their admission to the hospital. Of this number, one died (case report); 3 (children, aged 2 to 4 years) were treated by passing a twisted thread through the nose into the esophagus and stomach after which gastrostomy and repeated retrograde dilatation were carried out. Two of these patients are completely cured; the third has not had a dilatation for the past six months. He is to have the gastrostomy tube removed within a short time. In the meantime he is beginning to use the Hurst (mercury-filled) dilator himself.

The remaining eight patients were treated by blind bouginage (Jackson flexable bougie), all with very good results.

The blind bouginage method has been used in our Clinic for the past fifteen years. While it carries certain risks and, according to some observers, a high mortality rate, we have not had any accidents or deaths from its use and our results for the most part have been satisfactory.

The last patient treated by me, using the blind bouginage method, was an Italian coal miner, aged 65 years, who was brought to the hospital in an ambulance from a hospital in a small mining town. He gave a history of having ingested two tablespoonfuls of lye in orange juice with suicidal intent two months previously.

He was emaciated, weak, could not swallow any foods and vomited all liquids taken. His weight had dropped from 147 to 80 pounds.

On the first day of his admission I dilated the esophagus, beginning with no. 10 F. bougie and repeating the dilatation until a no. 18 F. bougie could be passed. I dilated the esophagus every other day so that at the end of the first week the patient was able to eat solid food. At the end of ten days I was able to pass a no. 34 F. bougie. The patient left the hospital on that day, ambulatory and feeling much stronger. I last examined him three weeks ago, using a no. 40 F. dilator. He is now carrying on his usual occupation of coal mining.

SUMMARY

Lye burns of the esophagus almost invariably result in certain complications, depending on the severity of the esophageal lesion. While cicatricial atresia of the esophagus is the most common complication, a case in which perforation of the stomach and gangrene of the lung with empyema occurred, is reported.

Various methods of treatment of cicatricial atresia of the esophagus are discussed. The

author's use of the indwelling Levine tube method in eleven selected cases, with satisfactory results, is described. An analysis of thirty cases is presented.

The literature is reviewed.

BIBLIOGRAPHY

1. Vincent, P. P.: Cicatricial (Benign) Strictures of the Esophagus: Tabulated Report of 186 Cases, Ann. Otol., Rhinol. & Laryng. 36:40 (March) 1927.
2. Abel, A. L.: Esophageal Obstruction, Oxford Med. Pub., Humphrey Milford, Oxford Univ. Press, 1929.
3. Jackson, Chevalier: Bronchoscopy & Esophagoscopy, Philadelphia, W. B. Saunders Co., 1927.
4. Haslinger, F.: 1920 Handbuch der Hals, Nosen u. Ohrenheilkunde, Denker u. Kahler, Berlin, IX, 249.
5. Leegaard, T.: Corrosive Injuries of the Esophagus with Particular Reference to Treatment of Acute Corrosive Esophagitis, J. Laryng. & Otol. 60:389-414 (Oct.) 1945.
6. McKinney, R.: J. Laryng. & Otol. 38:461, 1923.
7. Uhde, G. I.: Chemical Burns of the Esophagus, Ann. Otol., Rhin. & Larying. 55:795, (Dec.) 1946.
8. Salzer, H.: Wein, kiln. Wchnschr. 33:307,1920; Early Bouginage of Esophagus in Cases of Cauterization with Lye, Wien. med. Wchnschr. 84:736 (June 30) 1934; Treatment of Burns of Esophagus, Wien. med. Wchnschr. 77:488 (April) 1927.
9. Bokay: Wein. klin. Wchnschr. 37:282, 1924.
10. Gellis, S. S., & Holt, L. E., Jr.: Treatment of Lye Ingestion by Salzer Method, Ann. Otol., Rhin & Laryng. 51:1086-1088 (Dec.) 1942.
11. Hanckel, R. W., Jr., Jr.: Observations Concerning the Salzer Method of Treatment of Lye Burns of the Esophagus, South. M. J. 39:263 (March) 1946.
12. Crowe, John T.: Poisoning Due to Lye: Value of Bokay Prophylactic Dilation in Prevention of Early Strictures of the Esophagus, Am. J. Dis. Child. 68:9 (July) 1944.
13. McHenry, L. C., & Clay, R. A.: Benign Esophageal Strictures, J. Okla. M. A. 38:469 (Nov.) 1945.
14. Cody, Claude C., III: Management of Esophageal Strictures, Arch. Otolaryng. 47:133 (Feb.) 1948.
15. Vincent, P. P.: Mangement of Benign Strictures, J. A. M. A. 113:2128 (Dec.) 1938.

KEEPING WELL PERSONS HEALTHY

The family doctor, or any physician in private practice for that matter, ordinarily sees his patients only when they are sick or ailing. When he does see them, his natural desire, unless he is a charlatan, is to restore them to health as quickly as possible. In other words, he wants to get the patient back to a normal productive life as soon as it is safe and proper. This is naturally of particular importance if the patient is the wage-earner for a family.

The industrial physician has exactly the same idea; he is perhaps more concerned with keeping the well person healthy and in protecting the handicapped person from further damage. His purpose, his *raison d'etre*, therefore, is to keep the human element in industry efficient and productive. Naturally this is advantageous to the industry and its management, but it is even more of a boon to the individual.—Thos. L. Shipman, M. D., in New England Journal of Medicine.

INFARCTION OF THE APPENDICES EPIPLOICAE*

By JOHN D. GERMAN, M. D., F. A. C. S.,
Huntington, W. Va.

The appendices epiploicae are flattened projections of fat covered by envelopes of peritoneum. They are found along the colon from the cecum to the lower sigmoid, being attached chiefly along the anterior taenia of the colon but also along the posterior internal muscular band. They are most numerous in the transverse and pelvic colon and are described as occurring alongside the mesentery of the vermiform appendix. Their size varies from a few millimeters to several centimeters and they contain a variable amount of fat, usually in direct proportion to the general obesity of the patient. Blood is supplied by means of a single artery and vein which enter and leave through the stalk at the base of the appendage. These structures often contain small lymph nodes, and lymphatic loops with afferent and efferent lymph channels have been demonstrated by subserosal india ink injections. Embryologically, they are said to appear in the fetus anywhere from the fifth to the seventh month of intrauterine life. The dog, cat, rabbit and rat do not have these "seroappendages" but they are found in anthropoid apes.

The physiologic function of the epiploic appendages is not understood but several theories have been presented. Robinson has suggested that they have something to do with movement of fluid within the colon. Patterson has suggested that they may act as bumpers for the large intestine so that peristalsis is facilitated. Other authors have indicated that they act as fat depots and as a protective mechanism against spread of peritoneal infections.

Appendices epiploicae were first described in 1531 by Vesalius. In 1703 Littre reported a free foreign body in the peritoneal cavity of a cadaver which probably represented an epiploic appendage. Virchow and others reported similar findings at subsequent dates. The first case of true torsion of an appendix epiploica is that of Tomellini in which the man died of cardiac disease and necropsy revealed a twisted appendix epiploica. Although review of the literature reveals many instances of diseased appendages, only about 65 cases of infarcted or gangrenous appendices epiploicae have been reported.

Diseases affecting these structures which have been reported include the following:

---

*Presented before the staff of St. Mary's Hospital, at Huntington, West Virginia, November 24, 1948.

1. Infarction or gangrene due to diminished blood supply caused by torsion.

2. Infarction or gangrene due to pressure or torsion within a hernial sac.

3. Calcification of the appendix epiploica due to interference with the blood supply and saponification of the fat. In such cases the appendage may remain attached to the bowel wall or may be cast off as a free foreign body within the peritoneal cavity.

4. Inflammation due to bacterial invasion from an associated diverticulitis of the colon.

5. Intestinal obstruction due to adherent bands between diseased epiploic appendages in which the constricting band stretches across the antimesenteric border of the colon.

6. Epiploitis with abscess formation following laparotomy, herniorrhaphy, and other intra-abdominal procedures.

7. Intussusception of an appendix epiploica causing intestinal obstruction.

8. Carcinomatous metastasis within the epiploic appendages.

9. Simple hyperplasia or lipomatous enlargement.

Of all these conditions torsion occurs more frequently than any other pathologic process in the appendices epiploicae. In most cases of acute torsion, there is sudden onset of abdominal pain which is frequently generalized but which may become localized to the area directly overlying the affected structure. The portions of large bowel involved are about equally divided between the sigmoid and the cecum so that the pain may be located on the right or left. The pain is variously described as sharp or dull. Nausea and vomiting occur in most of the cases and there may be accompanying constipation or diarrhea. Dysuria and urinary frequency are not uncommon.

Upon examination the patient appears to be in severe pain but otherwise may not seem to be acutely ill. There may be localized tenderness over the site of torsion with or without the rebound phenomenon. Involuntary muscle spasm may be observed. There may be rectal tenderness, either unilateral or bilateral. Occasionally a mass is palpable. Low grade fever is often present and leukocytosis may be slight or the white blood count may reach 20,000.

Diagnosis is difficult and apparently the only correct preoperative diagnosis of torsion of an appendix epiploica which appears in the literature is that attributed to Dr. Wayne Babcock and reported by Fiske in 1936. The preoperative diagnosis is more likely to have been appendicitis, cholecystitis, ovarian cyst with torsion, diverticulitis, renal calculus, Meckel's diverticulitis, intestinal obstruction from some other cause, salpingitis, or mesenteric thrombosis. Cases of chronic torsion of the appendages are reported in which there have been recurrent bouts of abdominal pain suggesting chronic gallbladder disease, neoplasm of the large bowel, or chronic diverticulitis. It would not be surprising to find that many patients who have been burdened with a diagnosis of "chronic colitis" in reality have been suffering from diseased appendices epiploicae.

The mechanism of torsion of the appendices epiploicae is obscure. The prevalence of the condition among obese, well-nourished individuals is probably significant, for it is well known that in obese persons the appendages tend to be abnormally long and heavy so that twisting of the pedicle is easy to visualize. Some have placed emphasis on the long narrow pedicle as a cause of torsion, but others find that it may occur with equal frequency in those with short broad pedicles. Sudden exertion or trauma is usually not a factor. Payr has suggested that twisting of the appendiceal vein, which is longer than the corresponding artery, may precipitate venous occlusion and subsequent infarction. At any rate, following torsion of the appendage or thrombosis of the epiploic vessels, aseptic gangrene develops. The gangrenous tissue then becomes organized and a fibrous mass results unless in the meantime the clinical picture has led to laparotomy and removal of the affected appendage. The fibrous mass, if it has not been excised, may later calcify and may or may not remain attached to the colon. Calcified appendices epiploicae have been recognized on roentgenograms of the abdomen and pelvis.

The following case is presented as an example of how confusing the clinical picture can be.

CASE REPORT

J. S., a 25 year old white male gas station attendant, was admitted to the hospital July 15, 1947 complaining of severe pain in the left lower quadrant of the abdomen. The pain had been present for two days and had required narcotics for relief. There was some nausea but no vomiting. He had no diarrhea nor constipation, and he complained of no urinary symptoms. The patient had noticed no fever and had had no chills. Examination revealed a moderately obese while male who appeared to be in considerable pain. Temperature by mouth was 99 F., pulse 90, and respiration 20. The general

physical examination was not remarkable but abdominal examination showed localized tenderness to deep pressure in the left lower quadrant, without muscle spasm. Rebound tenderness was present but it was not referred elsewhere in the abdomen. A well healed appendectomy scar was noted in the right lower quadrant. There was no rectal tenderness on either side. The leukocyte count was 8,800 with a normal differential smear. The red blood count was 4,550,000 and the hemoglobin was 100 per cent. Urinalysis was negative except for a trace of albumin and an occasional white cell p.h.f. The blood Wassermann and Mazzini tests were negative. Intravenous pyelograms demonstrated no abnormalities and the barium enema was negative. Sigmoidoscopic examination to the 10 inch level revealed no pathologic process. Because of persistent pain and tenderness in the left lower quadrant and because a definite diagnosis could not be otherwise established, exploratory laparotomy was carried out on July 21, 1947. The tentative preoperative diagnosis was diverticulitis of the sigmoid colon.

The abdomen was entered through a left paramedian muscle retracting incision and general palpation of the abdominal viscera was not remarkable. However, on the surface of the sigmoid colon there was a round firm mass on the antimesenteric aspect of the bowel approximately 2 x 2 x 2.5 cm. in size. It was an infarcted appendix epiploica which had attached itself at the distal end to a second place on the sigmoid, forming a bridge. It was readily excised without injury to the bowl. Several other long redundant epiploic appendages were removed from the area and small diverticula were noted at the bases of some of these. There was no evidence of a femoral or inguinal hernia. Closure of the wound was accomplished using interrupted silk sutures for the fascia. The postoperative course was quite satisfactory and the patient was discharged on the fifth postoperative day, returning to light work in three weeks. The pathologist reported "hemorrhagically infarcted appendices epiploicae due to twisting."

Five months following the operation the patient had left lower quadrant pain and tenderness for several days but with conservative measures the symptoms subsided and to my knowledge have not recurred.

SUMMARY

1. The literature concerning diseases of the appendices epiploicae has been briefly reviewed.

2. Another rather typical case of infarction of the epiploic appendages has been presented.

3. Acute disease of the appendices epiploicae is a definite clinical and pathologic entity and should be considered in any case with atypical abdominal pain, particularly when the pain occupies the left lower abdominal quadrant.

4. Preoperative diagnosis of epiploic appendix disease is difficult to establish.

BIBLIOGRAPHY

Barden, R. P.: Calcified Epiploic Appendages: A Radiological Curiosity, Radiology, 33:768-69 (Dec.) 1939.

Baumeister, C., et al: Obstruction Due to Appendices Epiploicae, Ann. Surg. 107:153-154 (Jan.) 1938.

Black, S. O.: Torsion of Appendices Epiploicae, with Report of a Case, South. M. J. 16:35-37 (Jan.) 1923.

Byberg, R., & Lam, C. R.: Epiploic Appendicitis: A Cause of Left-Sided Abdominal Pain, Ann. Surg. 122:127 (July) 1945.

Fiske, F. A.: Intra-Abdominal Torsion of the Appendices Epiploicae, with Report of 2 Cases and Review of the Literature, Am. J. M. Sc. 192:254-260 (Sept.) 1936.

Griffin, H. M., et al: Surgical Significance of Epiploic Appendages, Arch. Surg. 45: 351-360 (Sept.) 1942.

Gilchrist, R. K., & David, V. C.: Carcinoma Metastases in Appendices Epiplocae, Surgery 13: 574-577 (April) 1943.

Harte, M. S.: Chronic Partial Intestinal Obstruction Due to Intussusception of an Appendix Epiploica, Surgery, 13:555:560 (April) 1943.

Hunt, V. C.: Torsion of Appendices Epiploicae, Ann. Surg. (Jan.) 1919.

Ives, H. R.: Gangrenous Appendices Epiploicae, U. S. N. Med. Bull. 46: 1889 (Dec.) 1946.

Klingenstein, P.: Some Phases of the Pathology of the Appendices Epiploicae: With a Report of 4 Cases and a Review of the Literature. Surg., Gynec. & Obst. 38 376-382 (March) 1924.

Mabrey, R. E.: Intra-Abdominal Torsion of Appendices Epiploicae, New England J. Med. 222: 12-14, 1940.

Marbury, W. B., & Jackson, R. L.: Pathological Changes of the Appendices Epiploicae, Am. J. Surg. 56:110-112 (July) 1948.

Moore, G. A.: Appendices Epiploicae, New England J. Med. 222: 919-912, 1940.

Morales, O.: Calcified Appendices Epiploicae as Freely Mobile Bodies in the Abdominal Cavity, Acta radiol. Scandinav. 24: 653 (Aug) 1944.

Palmer, B. M. & Hardman, J. E.: Strangulated Epiploic Appendix Simulating Appendicitis, Ann. Surg. pp. 1118-1120 (Dec.) 1931.

Patterson, D. C.: Appendices Epiploicae, New England J. Med. 209: 1255-1259 (Dec. 21) 1933.

Pines, B., et al: Primary Torsion and Infarction of the Appendices Epiploicae, Arch. Surg. 42:775 (April) 1941.

Porter, S. D.: Torsion of Appendices Epiploicae, J. Iowa State M. Soc. 33: 223 (May) 1943.

Randall, H. E.: Acute Gangrenous Appendix Epiploica, J. A. M. A. 99: 1684 (Nov.) 1932.

Robertson, G.: Strangulation of an Appendix Epiploica Simulating Appendicitis, Brit. M. J. 1: 325 (Feb. 24) 1923.

Thorek, M., & Thorek, P.: Postoperative Epiploitis with Abscess, J. A. M. A. 98: 1548-1549 (April 30) 1932.

CARCINOMA OF THE JEJUNUM

(Report of a Case)

By F. LLOYD BLAIR, M. D., F. A. C. S.,
Parkersburg, W. Va.

Miss M. N., a 68 year old white female, was seen in consultation Feb. 4, 1946, complaining of progressive weakness and weight loss over a period of eight months. She had lost 35 pounds. For the past six months she had noticed that her stools had been frequently dark in color and on two occasions definitely tarry. There had been no other change in bowel habits. She had been having some cramps and gasseous distention in the upper abdomen over a two month period. The pain had been just above and to the left of the umbilicus and was worse about two hours after meals. For the past two weeks she had noticed a lump which she could move around in the abdomen and which would change position when she turned from side to side. A physician had been treating her symptomatically for one year.

Physical Examination.—The patient was well developed and poorly nourished with marked signs of anemia and weight loss. The skin was pale, dehydrated and inelastic. There was a mass about 7 cm. in diameter in the left upper abdomen. The mass was nontender, firm, freely movable, rounded and slightly irregular in contour. It could be moved to the extreme right and down into the pelvis. Marked traction on the mass produced a sense of vertigo.

Laboratory Examination.—Urinalysis normal. RBC 2,080,000. Hemoglobin 36 per cent. WBC and differential count were normal. The blood Wassermann and Kahn tests were negative. Four stool examinations for occult blood were strongly positive. Bleeding time was 1 minute, 45 seconds. Clotting time was 4 minutes, 15 seconds. Platelet count reported normal. Nonprotein nitrogen 32. Intravenous PSP 82 per cent in two hours.

X-Ray Examination.—The colon filled normally there was a pressure defect present in both the anteroposterior and lateral views interpreted as representing pressure from an extrinsic mass. There was no evidence of pathology in the esophagus, stomach or duodenum. At the sixth hour interval the stomach was empty and the head of the barium column was in the transverse colon, with no evidence of obstructive loops in the small bowel. It was believed that the mass present in the left midquadrant was not connected with the gastrointestinal tract.

The patient was given 2,000 cc. of blood and the abdomen was explored.

Operation.—Feb. 18, 1946. The abdomen was opened through a left paramedian incision. The liver was apparently normal. There was a mass measuring 10 x 5 x 5 cm. involving the jejunum on the mesenteric side about 20 cm. from the ligament of Treitz. The bowel was freely movable. The tumor extended down the mesentery about one-half the distance to its base. There was a large node very close to the superior mesenteric artery. There was no other evident metastasis. The mass was resected with the metastatic node and about 30 cm. of bowel, and an end to end anastamosis done. The abdomen was closed without drainage.

The patient's postoperative condition was good, her course uneventful, and she was discharged on the eighteenth postoperative day.

Pathologist's Report.—"The tumor occupies all the thickness of the bowel wall and is somewhat polypoid in character. There is an ulcerated area penetrating into the tumor itself. *Microscopic:* The section of the jejunum shows the normal mucous membrane of the small bowel undergoing a sharp transition to a malignant epithelial tumor which is forming glands, cystic spaces, papillary structures, and extensively invading the bowel wall. In one section it has practically reached the serosal surface. *Microscopic Diagnosis:* Adenocarcinoma of small bowel (jejunum), extension through bowel wall and into mesentery."

Progress.—Nov. 13, 1946. A small nodule was excised from the abdominal wall. It was reported by the pathologist as "metastatic adenocarcinoma probably from bowel."

The patient continued to enjoy good health and was doing an ordinary amount of house work. No metastatic masses could be palpated in the abdomen.

On June 28, 1947, diarrhea developed and numerous masses could be palpated in the abdomen. The patient was admitted to the hospital July 22, 1947 and died July 27, 1947. Her downward progress was accelerated by severe diarrhea which did not respond to medical therapy.

The pertinent findings at autopsy were: Massive metastasis to lymph nodes around the base of the mesentery. Metastatic areas on the parietal peritoneum. Metastases to the nodes around the head of the pancreas. Metastases to the lung. No skeletal system metastases were found.

INCIDENCE

Carcinoma of the jejunum is a rare disease. Swan,[1] in a search of the literature from 1929 to 1939, found 66 cases of jejunal cancer. Braun,[2]

in 1945, completed a search of the literature with a total of 112 known cases. Feldman[3] reports an incidence of 0.025 per cent of all carcinomas of the gastrointestinal tract. Rankin and Mayo[4] reported an incidence of 0.062 per cent of all carcinomas of the intestinal tract in the small intestine.

SYMPTOMATOLOGY

The first symptoms of carcinoma of the jejunum usually are loss of weight and weakness. Next in frequency is an unexplained anemia. Gastronintestinal symptoms such as vomiting and pain in the abdomen are late manifestations of the disease and connote obstruction or lymphatic metastases. Rarely the patient will have a massive hemorrhage but invariably there is occult blood in the stool if enough specimens are examined.

PHYSICAL FINDINGS

The physical findings depend on the stage of the disease. The early findings are those of unexplained anemia and progressive weight loss. The presence of distention and hyperperistalsis indicate latent obstruction. A palpable mass infrequently is seen and, if present, indicates an advanced stage of the disease.

DIAGNOSIS

A positive preoperative diagnosis frequently cannot be made. X-ray examination using new and improved techniques will give a positive diagnosis in a fair percentage of cases. In the majority of instances the diagnosis is not made until an exploratory operation is performed. If the results of treatment are to be improved, earlier exploratory procedures will have to be undertaken. It is felt that any patient with a completely unexplained anemia and loss of weight, with occult blood in the stools should have the benefit of an exploratory laporotomy.

TREATMENT

Radical surgical resection is the treatment of choice in all cases. Local resection and anastamosis should be done even in the presence of extensive lymphatic metastasis. X-ray therapy is of questionable value even for palliation.

PATHOLOGY

The usual site of jejunal carcinoma is the proximal portion. Carter,[5] in an analysis of 30 cases of carcinoma of the jejunum, found 72 per cent occurring within the first twelve inches of the jejunum. The growth may be annular, sessile or pedunculated.[6] The most common type of lesion is the annular constricting adenocarcinoma. Next in frequency is the sessile, infiltrating type in which ulceration is common and, finally, the polypoid type in which intussusception is not a rare complication.[7] Metastasis occurs early to the mesenteric lymph nodes and peritoneum and then progresses to the lungs, liver and long bones.

PROGNOSIS

The prognosis is uniformly poor. The average survival rate has been reported by various observers as from one year to seventeen months. The five-year cure rate averages 1 per cent.

SUMMARY

A case of carcinoma of the jejunum is presented. The literature is reviewed.

BIBLIOGRAPHY

1. Swan, J. M.: Carcinoma of Small Intestine, M. Times 74: 46, 1946.
2. Braun, Inre: Am. J. Digest. Dis. 13: 7, 234, 1946.
3. Feldman, M.: Clinical Roentgenology of Digestive Tract, ed. 2, Baltimore, Williams and Wilkins, 1945, p. 363.
4. Rankin. F. W., & Mayo, C. W.: Surg. Clin. North America 12: 915-917, 1932.
5. Carter, R. F.: Ann. Surg. 102: 1019, 1935.
6. McDougal, W. J.: Am. J. Surg. 66: 119, 1944.
7. Jahn, M., & Bay, M. W.: Am. J. Surg. 581: 145, 1942.

PREVENTIVE MEDICINE

We keep saying with monotonous regularity that it is easier to treat early diabetes than the later stages of the disease, easier to keep in good shape the heart of the patient examined before decompensation has set in; easier to save life when the carcinoma is detected before metastasis has occurred; easier to heal a small and new gastric ulcer than an old and deep one.

These are fine sentiments, but will the doctor really give an adequate office study to the patient who has no complaints—only a desire for a "thorough check-up"? It can be done. It needs patience, and interest, and professional competence, and above all, that special kind of imagination which sees the limitless possibilities of preventive medicine in the doctor's office.—J. Med. Soc. of N. J.

THE NERVOUS PATIENT

One of the best cures for the nervous patient is to arrange for him to be involved in doing something for someone else. It is a matter of common observation that the nervous or psychoneurotic patient is frequently at his best in some family crisis or emergency when he is extending and projecting his personality and ability beyond himself.

Many a physician has moments when he wishes that he dealt only with organic and even palpable disease, that he might be spared the annoyance and irritation of the long conversations and repeated questionings, but for most this is an idle dream. We shall all continue to be obliged to deal with the nervous patients. For most of us they will make up a large percentage of our practice. We will do well to learn to like them and better still to see to it that they like us.—Henry M. Winans, M. D., in J. Kansas Med. Soc.

The President's Page

The House of Delegates of the American Medical Association, at the interim session here in St. Louis in December, voted unanimously in favor of an assessment of $25.00 against each member of the Association to aid in the fight against socialized medicine. The Council of our State Association unanimously approved this action and further, asked each member to pay an additional $25.00 to be used in West Virginia.

The objects of this campaign are as follows:

1. To awaken the people to the dangers of a state controlled compulsory health insurance system.
2. To acquaint the people with the superior advantages of American medicine over the systems of other countries.
3. To stimulate the growth of voluntary health insurance systems and prepaid medical care plans.

This program has been well planned. It represents the thinking of the leaders of medicine in our country, and it is absolutely essential that we give it our full support. It has not come too late. The battle lines are drawn and the decisive engagements will be fought during the next few months.

This is a fight between the planners for a complete socialistic state, who believe in the common ownership and collective control of all production and exchange by the masses or proletariat, and those of us who believe in the capitalistic system of freedom of the individual and the private ownership of property.

American medicine is in the vanguard in this fight. You will remember that it was Lenin who said, "Socialized medicine is the keystone of the arch of the socialist state."

The spirit in which we West Virginians must attack has been best expressed by Washington, who during the darkest days of the Revolutionary War, said, "Leave me but a banner to place on the mountains of Augusta (West Virginia) and I will rally around me the men who will lift our bleeding country from the dust and set her free."

To arms, doctors of West Virginia!

Thomas G. Reed.

President.

West Virginia Medical Journal

Official Journal of
The West Virginia State Medical Association
302 Atlas Building, Charleston, West Virginia

Editor
Walter E. Vest, M. D. (1951) ..... Huntington

Managing Editor
Mr. Charles Lively ..... Charleston

Associate Editors
W. M. Sheppe, M. D. (1949) ..... Wheeling
Edward J. Van Liere, M. D. (1950) ..... Morgantown
G. G. Irwin, M. D. (1952) ..... Charleston
R. H. Edwards, M. D. (1953) ..... Welch

Editor Emeritus
James R. Bloss, M. D. ..... Huntington

Business Manager
Mr. Charles Lively ..... Charleston

Published monthly on the first day of the month, at Charleston, by The West Virginia State Medical Association.

Original articles are accepted on condition that they are contributed exclusively to the Journal.

Advertising rates furnished upon request. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the American Medical Association.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston 24, West Virginia. Telephone, Capitol 34-625.

OPEN LETTER TO OSCAR EWING

Honorable Oscar R. Ewing
Federal Security Administrator
Washington, D. C.

My dear Sir:

I am advised that you have been quoted in the press a number of times recently as making the statement that 325,000 persons die annually in the United States because of lack of medical care, or in other words, because of medical neglect.

Assuming that the present population of the United States is 145,000,000, your statement, if you are correctly quoted, would mean that 2,421 persons per million die annually from this cause. Reduced to local terms, Cabell and Kanawha Counties in West Virginia have a population approximating 375,000; and, assuming that our arithmetic is correct, this would mean that approximately 841 persons die in these two counties each year because of inadequate medical care.

As a practicing physician, I am fairly familiar with medical service in these counties. Frankly, I doubt the accuracy of these figures. The vital statistics for 1948, of course, have not been evaluated as yet. However, certainly the causes of death for those individuals dying in 1946 must have been classified and evaluated by some federal agency in Washington. Probably the figures for 1947 are also correctly tabulated by this time.

If you will select from the deaths in Cabell and Kanawha Counties in the year 1946 or 1947, as you may choose, the names of 84 persons whose death certificates show evidence of inadequate medical care or medical neglect, I will personally see that each one is investigated and a correct report of the circumstances surrounding the death made to you and also to the press.

I shall not ask for the names of the entire 841; ten per cent will suffice as a fair sample.

I think that if you will submit the names of 84 persons, it will give us ample opportunity to evaluate the medical service in our own local communities and to let you know whether there is even a modicum of accuracy in the statement accredited to you by the daily press.

Very respectfully yours,

WALTER E. VEST, M. D.,
Editor.

A TRIBUTE

After ten years of faithful and efficient service as a member of the headquarters staff of the West Virginia State Medical Association, Miss Catherine Clarkson has tendered her resignation to accept an executive position with the National Catholic Welfare Conference, in Washington, D. C. Her resignation was reluctantly accepted by the Council at the meeting at Charleston, on January 8.

Miss Clarkson knows and is known by most of the members of the State Medical Association. Her gracious willingness to serve has endeared her to the hearts of the members, who will not soon forget her courtesies and kindnesses at annual meetings and in her official capacity as secretary and assistant to the executive secretary at state headquarters.

We know that we speak for the entire membership when we express keen regret because Miss Clarkson has seen fit to leave her post at Charleston. We extend to her very best wishes for continued success in her new work in the nation's capital.

PERSONAL TOUCH EFFECTIVE

Dr. R. J. Wilkinson, of Huntington, past president of the West Virginia State Medical Association, has mailed letters to over a hundred close, personal friends throughout the state, asking and

answering several pertinent questions concerning proposed federal compulsory health insurance. The letter is so timely and the points so well taken, that we reproduce it in its entirety:

> I am imposing upon our friendship and long acquaintenance in bringing to your attention one of the major catastrophic dangers that confronts the American people, namely socialized medicine. This is not solely a doctor's fight, because YOU, and not the doctor, will be socialized.
>
> Under the proposed legislation there will be a compulsory government controlled insurance for sickness and hospitalization. I need not tell you that the billions of dollars needed for such a program must be met by increasing taxes from both individuals and employer.
>
> Such a program was started years ago in England. Patients were given the choice of physicians and hospitals first, but as time progressed more and more liberties were sacrificed, and most of the hospitals became government property, thereby driving the physician to participate in this sinister bureauratic program, even though it was against his will. He could not own a hospital, and was denied hospital privileges unless he became a party to this socialized plan.
>
> It is conceded by everyone that America has the finest type of medical service to be found anywhere. It is also conceded that the medical profession has worked in the past and will continue to work in the future with local organizations in caring for the indigent patient regardless of monetary consideration, while the Blue Cross and other types of voluntary insurance care for the low income groups. Why change to a new system that has proven itself everywhere else to be costly and inefficient?
>
> If the government must spend tax money for the local communities, why not present all veterans hospitals to the states, counties, or municipalities and abandon one of the chief sources for billions of dollars of governmental expense each year? The cost of operating these hospitals is burdensome and the investment is colossal, while the good accomplished is, to say the least, not comparable with the best. Let the veteran select his physician and hospital and the bills can be met by the Veterans Administration on some agreed fee basis.
>
> A plan of this kind would insure a superior service and be the means of saving untold millions of the taxpayers money, not to mention the fact that a curtailment of Veterans Administration activities would be a safeguard to the American way of life in caring for the sick.
>
> No suggestion will receive official notice in Washington unless a vigorous protest is registered by YOU and other good citizens—a protest against compulsory sickness insurance.

If every member of the West Virginia State Medical Association will do as Doctor Wilkinson has done and proceed to conduct a personal educational campaign, or if personal letters were written to fifty, twenty-five, or even ten persons with the request that each get in touch with his Congressmen and the two United States Senators, we would have no fear of the action of the entire West Virginia delegation in Congress if the bill to socialize medicine ever reaches the floor of the Senate or House of Representatives.

NATIONAL HEART WEEK

National Heart Week in 1949 has been designated as the week of February 14 to 21. It will be a period of intensified public education and fund raising within the national campaign of the American Heart Association, February 7 to 28.

Though limited drives were conducted in 1947 and 1948, this will be the first major campaign of the Association. It will be nationwide in scope, and will seek contributions totaling $5,000,000. Local affiliated heart associations have been provided with top central leadership, field guidance and practical campaign material. They will retain seventy per cent of the funds collected in their areas to facilitate locally needed projects in research, education, clinical and other community services.

Physicians everywhere have been giving willing and invaluable assistance to local campaign efforts, considering themselves as the group basically concerned with the fight against heart disease. Reports from various regions indicate that physicians not only have been assisting in organizational activities, but have rendered important services by speaking on heart disease before civic and club groups. These first hand reports by physicians have spurred the recruiting of volunteer workers.

A high measure of success has attended the effort this year to win increased participation of business and service organizations. Both the National Association of Retail Druggists and the National Association of Chain Drug Stores have offered generous cooperation in displaying poster material and coin collectors. Service groups that are participating by organizing local lay-medical campaign committees include the Kiwanis, Lions and Rotary Internationals; the American Legion and American Legion Auxiliary; the U. S. Junior Chamber of Commerce; and the National Federation of Business and Professional Women's Clubs. Excellent help from the publicity standpoint is being provided by the Fraternal Order of Eagles, the Knights of Pythias, the Knights of Columbus, and others.

A BRITISH DOCTOR SPEAKS

Medical care in England does something to the doctor as well as the patient, according to a letter received by Dr. F. C. Reel, of Charleston, from a doctor still there with whom he became acquainted during World War II.

From what this English doctor says, there is apparently nothing good about government supervision and control. He confirms most that has

been written about the nationalization of medicine in that country.

"It takes the initative out of good doctors," he says, "encourages poor doctors, allows people to play on it, and makes work shies (Ed: Absenteeism). While it looks well on paper and sounds very idealistic, it's a different thing when it is put to test". Continuing, this doctor says that "human nature, being what it is, wants something for nothing. I can assure you that it will not work here and will be the first nationalized scheme to break down.

"Patients are not examined properly, but are done routinely. The middle class, such as teachers, and shop keepers and managers, cannot afford the time to queue up at the doctor's surgery and cannot afford to pay twice, that is to have a private doctor, too, as they have to pay $2.00 a week to the national scheme, and a private doctor $2.00 a visit."

It has been suggested that it would be a fine thing for the American Medical Association to send to England a committee composed of professional and lay men and women to study the effects of state medicine in that country. Perhaps this will be done. At least it is worthy of serious thought, and a first-hand study of conditions as they are reported to exist in that country would do much to prepare the opponents of compulsory national health insurance for the fight that lies ahead in Congress.

DOCTORS IN THE U. S.

The American Medical association reports that there are now 199,745 doctors in the United States and this total provides a doctor for every 710 persons in the country. The average age of our doctors, says the association, is now 44.4 years which is about a year lower than it was in 1940. This, says the association, reflects the "relatively large number of physicians trained since 1940."

If this is part of the American Medical Association's campaign against any kind of socialized medicine, it is misleading. The trouble is that the doctors are not distributed according to population.

But we do not propose to begin the argument on socialized medicine. That argument will come with all its fury when the new Congress is given legislation on the matter.

This will become a very bitter argument. Many persons are quick to criticize a doctor. And doctors are quick to defend each other.

Today many doctors are inhumanly overworked. But it is always when there is difficulty in finding a doctor that the profession is subjected to great criticism. All of which is unfortunate. There is a sort of conflict that exists between doctors and the rest of the people. And it is to no good purpose.

The medical profession needs to do a better job of public relations. And all the people need to realize that no doctor will be able to do them any lasting good unless they have faith in him.—Fairmont Times.

CONCERNING THE DOCTOR DRAFT

There is good reason to believe that early in 1949 Congress will debate an amendment of the Selective Service Act to remedy the shortage of physicians in the newly expanded armed forces. What the public reaction will be, both medical and lay, remains to be seen, but already cries of distress and charges of discriminatory legislation are being faintly heard in medical circles.

It is well to bear in mind Congress's purpose in undertaking this postwar expansion. Primarily it is to put teeth into its belated efforts to prevent World War III, and failing that, to give the kind of civilization in which we all believe a reasonable chance for survival in what would amount to a war of extermination—at least of ideologies. This would appear to be objectives to which only our enemies could take reasonable exception.

The magnitude of the stake must never be forgotten. By now it should be clear to everyone over twelve years old that if another world war is not prevented there will be no question of seizing grandpa's musket from over the fireplace and hastening to Concord or Lexington. Nor will it be simply a matter of providing medical officers for the armed forces, by draft or otherwise. Every man, woman and child will be involved, and there will be no time for claiming constitutional rights, because the very existence of constitutional government will be in the balance.

While one indulges in basic thinking, it may be well also to contemplate the alternative method of enrollment for service in time of public need. The volunteer system, if system it may be called, may have the advantage of avoiding compulsion, but it has also certain glaring faults. It is unfair. It rewards the shirker, the parasite and the selfseeker while it penalizes the willing, the conscientious and the ready. Most citizens are glad to do their share of the dirty work so long as everyone else is doing his, but they dislike being played for suckers. Its second obvious defect is inefficiency. There can be no assurance that the person who volunteers is qualified, or even needed, for the job.

It need not be concluded on that account that the failure to meet military quotas by voluntary enrollment means a tendency on the part of the profession to shirk its duty. Rather, it may be considered a reflection of the ordinary man's desire for fair play and the thoughtful man's appreciation of the importance of meeting his country's vital undertakings with an equal efficiency of action.

It is earnestly believed that any future legislation that is fair, efficient and necessary will be approved by the medical profession, regardless of the personal sacrifices it may demand of individual physicians.—New England Journal of Medicine.

GENERAL NEWS

LEGISLATIVE PROGRAM IN FINAL FORM GIVEN UNANIMOUS COUNCIL APPROVAL

A modern record for attendance at meetings of the Council of the West Virginia State Medical Association was set at Charleston, January 8, when, for the first time in seven years, every member was present and all remained for the session, which lasted nearly five hours.

New Members Welcomed

New members were welcomed by Dr. Thomas Bess, the chairman, who congratulated the Council as a whole for the important work that was done during his term as president. He asked for continued wholehearted cooperation in the campaign for the enactment into law of the legislative program that is to be presented to the legislature.

Medical-Dental School

The legislative program in final form, which was presented by the heads of committees which have had the matter in charge for several months, was unanimously approved by the Council.

The legislature is being asked for an appropriation of $2,000,000 from surplus state funds for the construction of a four-year school of medicine and dentistry of West Virginia University, to be located at Charleston. In addition, the sum of $1,900,000 is being asked from surplus state funds for the construction, in connection with the proposed school, of a state hospital for diagnosis, treatment of chronic diseases, and rehabilitation services.

Both of these items have been approved by the Board of Public Works and will be in the new budget bill which will probably be introduced sometime during the week of January 24.

An enabling act providing for the creation of a four-year school of medicine and dentistry under the supervision and control of the board of governors of West Virginia University will be introduced at the same time.

State Health Department Reorganization

The bill for the reorganization of the state health department, as finally approved, provides for the creation of a state board of health to be composed of three physicians or surgeons, one dentist, one osteopathic physician, one pharmacist, one hospital representative, and two representative citizens. The members would be appointed for staggered terms of from one to nine years. Not more than five of the nine members could belong to the same political party. Not less than one or more than two members could be appointed from the same congressional district.

The board would have powers similiar to those now vested in the board of governors of West Virginia University, and would have supervision and control of the hospital proposed to be built in connection with the four-year school of medicine and dentistry.

The bill would provide for the biennial registration of doctors in accordance with the plan heretofore approved by the Council.

A medical licensing board to handle all matters relating to licensure to practice medicine in West Virginia would take the place of the present public health council.

Under the proposed bill, all state tuberculosis, mental, and general hospitals, with the exception of the hospital planned in connection with the medical-dental school, would remain under the supervision of the board of control. The crippled children's division would remain in the department of public assistance.

Composite Licensing Board

The Council voted unanimously to allow additional time to sub-committees heretofore appointed to prepare legislation that will require all those practicing medicine and surgery to take the same examination. The action was taken upon recommendation of the fact finding and planning committee and the legislative committee.

Change in Committee Names

It was ordered that the House of Delegates be requested to change the name of the Publicity Committee to the Public Relations Committee, and to merge the Fact Finding and Planning Committee and the Legislative Committee under the name of "Fact Finding and Legislative Committee." Dr. Thomas G. Reed, the president, was authorized to request the

GOVERNORS REAFFIRM STAND ON MEDICAL EDUCATION

Governor Clarence W. Meadows, in his last address to the Legislature, delivered on January 12 in the House Chamber at the Capitol in Charleston, reaffirmed the recommendation previously made by him that a four-year medical-dental school be established in West Virginia. He urged that proper provisions be made for the training of young men and women in the field of medicine and health under such safeguards which would assure their administering to West Virginia people for at least a limited time after graduation. He urged the extension of the services of the state health department and several other state bureaus and departments.

In his inaugural address on January 17, Governor Okey L. Patteson followed his primary and general election declarations by urging "better facilities for the training of doctors, dentists, nurses, and health workers."

The platforms of both the Democratic and Republican parties include declarations in favor of the establishment of a four-year school of medicine and dentistry in this state.

publicity committee to function as a public relations committee during the remainder of 1949.

A. M. A. Assessment

The Council considered at length the A.M.A. assessment of $25.00 against each member, and then unanimously approved the asessment and directed that collection from the individual members be made by component socities and remitted to the A.M.A. through the headquarters offices at Charleston.

Public Relotions Progrom

The executive secretary read an excerpt from the minutes of a meeting of the Mercer County Medical Society, held at Bluefield, December 16, in which the society went on record as unanimously approving the assessment of $25.00 for the A.M.A. and an additional $25.00 for the West Virginia State Medical Association.

The matter of funds with which to conduct a statewide public relations program was discussed by several members of the Council, and a voluntary contribution of $25.00 per member was unanimously approved, with the understanding that an educational and public relations program get under way immediately under the direction of the public relations committee.

The plan as approved by the Council will be submitted to the House of Delegates for ratification at the annual meeting in August.

Honorory Members

The following members were elected to honorary lifetime membership: Drs. Carson A. Willis, Clarksburg; Thomas W. Moore, Huntington; W. Byrd Hunter, Huntington; Horace S. Falconer, Fairmont; and Patrick L. Gordon, Charleston.

A. M. A. Affiliote Fellowship

Dr. Everett R. Cooper, of Troy, an honorary member of the Association, was nominated for affiliate fellowship in the American Medical Association.

Diobetes Project Approved

The establishment of a case finding unit in Marshall County, under the direction of the Diabetes Committee and the state health department, was unanimously approved.

UMW Advisory Committee

The president was authorized to appoint an advisory committee of three members to consult with the three area medical administrators of the UMW Health and Welfare Retirement Fund in this state. One member is to be appointed from each of the three West Virginia districts.

Committee on Hospitol Relotions

Action upon the request of Dr. Elmer Hess, of Erie, Pennsylvania, chairman of the A.M.A. Committee on Hospitals and Practice of Medicine, for the appointment of a standing committee on hospital relations was ordered referred to the House of Delegates.

Members Present

The meeting was attended by Dr. Thomas Bess, chairman; Dr. Thomas G. Reed, president; Dr. Fred Richmond, first vice president; Dr. J. C. Huffman, second vice president; Dr. T. M. Barber, treasurer; and Drs. Wade H. St. Clair, Russell B. Bailey, L. Rush Lambert, Fred R. Whittlesey, M. H. Porterfield, E. H. Hunter, George F. Evans, James S. Klumpp, A. R. Sidell, J. C. Lawson, E. L. Gage, D. C. Ashton, and Ressel Kessel; and Mr. Charles Lively, secretary ex officio.

The meeting was also attended by Drs. Walter E. Vest, Ivan Fawcett, Frank V. Langfitt, D. A. MacGregor, and Thomas L. Harris.

LIFETIME USE OF BIRTH CERTIFICATE NUMBER

A new system of numbering birth certificates has been inaugurated in the division of vital statistics of the state department of health.

Numbers will identify the babies by their homeland, state, year of birth, and the order of their birth within the state. For example, the first number assigned in 1949 was 147-49-000001; the first number "1" because it was born in the United States, and the "47" because it was born in West Virginia. The "49" after the dash indicates the baby was born in 1949. The figures following this indicate the numerical registration of the child.

At the beginning of each new year the number will begin again with "000001" for the first birth.

The adoption of the new system, it is hoped, will help to avoid duplication and fraud. It is the plan of the social security board and other governmental agencies using serial numbers to use the number assigned by the division of vital statistics through the life of the individual.

COUNTY SOCIETIES ELECT OFFICERS

Several component societies have elected officers for 1949. The following is a supplemental list of new officers reported to the West Virginia State Medical Association:

Barbour - Randolph - Tucker: President, Elmer E. Myers, Philippi; first vice president, C. L. Leonard, Elkins; secretary-treasurer, Donald R. Roberts, Elkins (reelected); and delegates to the House of Delegates, J. R. Woodford, Philippi, and Semone Lilenfield, Parsons.

Monongalia: President, W. H. Howell, Morgantown; vice president, L. M. Strawn, Morgantown; secretary, C. K. Sleeth, Morgantown (reelected); and treasurer, C. C. Romine, Morgantown.

Raleigh: President, W. Fred Richmond, Beckley; first vice president, Everett B. Wray, Stotesbury; second vice president, Hugh S. Edwards, Beckley; secretary-treasurer, Wallace B. Lilly, Beckley; delegates, T. U. Vermillion and Paul E. Vaughan, Beckley; alternates, G. C. Hedrick, Jr., Beckley, and John W. Whitlock, Affinity; and, board of censors, R. G. Broaddus, L. G. Houser, and M. M. Ralsten, Beckley.

LEGISLATION AND PUBLIC RELATIONS HIGHLIGHT SECRETARIES' CONFERENCE

Presidents and secretaries of county and area medical societies from every section of West Virginia, representing over 1,400 doctors, joined with the 18-member Council at a meeting in Charleston on January 9 in initiating a campaign designed to make 1949 a "health and higher education year." More than sixty doctors attended the meeting.

The occasion was the annual conference of officers of component societies, and discussion at the all-day meeting was limited to public relations, administration, and the legislative program, which has the unanimous approval of the Council and the two key committees, fact finding and planning, and legislative.

Governor Meadows on Program

One of the highlights of the morning session was the appearance of Governor Clarence W. Meadows for a brief address in which he stressed the need for expanded medical educational facilities and an extension of public health service in the state.

Legislative Program

The legislative program was presented by Dr. Thomas Bess, of Keyser, immediate past president, and now chairman of the Council; Dr. Thomas L. Harris, of Parkersburg; Dr. Frank V. Langfitt, of Clarksburg; Dr. D. A. MacGregor, of Wheeling; and Dr. N. H. Dyer, state health commissioner. Dr. Thomas G. Reed, of Charleston, who assumed office as president January 1, presided at the meeting.

The legislative program includes the creation of a four-year school of medicine and dentistry of West Virginia University, to be located at Charleston, and the complete reorganization of the state health department, with increased appropriations for public health work.

Tom Hendricks Luncheon Speaker

Mr. Thomas A. Hendricks, of Chicago, secretary of the American Medical Association Council on Medical Service, was the guest speaker at the luncheon. His topic was "Public Relations," and he discussed most interestingly the proposed Truman health bill and steps that are being taken to inaugurate an educational campaign in favor of voluntary sickness insurance as opposed to the proposed national compulsory health insurance program.

Public Relations Program

The entire afternoon session was devoted to medical public relations in West Virginia. Dr. Frank J. Holroyd, of Princeton, chairman of the new committee on public relations, presided as chairman and led the roundtable discussion.

Delegates from component societies discussed the need for an educational program in opposition to any form of compulsory health insurance, state or national, and it was unanimously agreed that the educational campaign against socialized medicine should be carried to every section of the state.

COUNCIL-APPROVED PUBLIC RELATIONS PROGRAM GETS UNDER WAY IN STATE

Taking the position that socialized medicine can be defeated at the "grass roots" level, the new public relations committee of the West Virginia State Medical Association has inaugurated a program to carry to the people of this state a direct campaign which is designed to prove conclusively that voluntary sickness insurance is preferable to any form of compulsory health insurance.

The committee, which is composed of the members of the publicity committee, is as follows: Dr. Frank J. Holroyd, Princeton, Chairman; Drs. Athey R. Lutz, Parkersburg; Walter R. Wilkinson, Huntington; R. D. Gill, Wheeling; and R. J. Condry, Elkins.

The program for a statewide public relations campaign, which got under way forty-eight hours after the Council approved the project, will be broadened in scope when committees have been set up by the various component societies.

In a letter mailed the middle of January to the secretary of each component society, the new committee asks for the appointment immediately of a public relations committee composed of one-tenth of the members. Each will be asked to contact ten other members, so that practically all doctors in organized medicine may participate in the program.

The doctors will then be asked to explain to at least twenty of their friends, lay and professional people, why an educational campaign is being sponsored by the State Medical Association to fight socialized medicine. The reasons for opposition to the proposed law, both from an economic and professional standpoint, will be stressed.

Each society is asked to set up a speaker's bureau and to provide speakers for professional and lay groups.

The expenses for the educational and public relations program will be financed from voluntary contributions of $25.00 per member which the Council has asked all members of the State Medical Association to pay in addition to the American Medical Association assessment of $25.00.

HEALTH UNITS MERGE IN WOOD COUNTY

Dr. Guy R. Post has been confirmed by the public health council as health officer and director of the new Wood-Parkersburg health department at Parkersburg. He is a native of Lewis County, and has been located for several years at Clarksdale, Mississippi, where he has been director of the Coahoma County health department.

Dr. Post, who will serve full-time, assumed his new duties January 1, succeeding Dr. Robert P. Fosnaugh, who has been serving in a part-time capacity.

NEW HEALTH OFFICER AT ALDERSON

Dr. J. O. Williams, of Alderson, has been confirmed by the public health council as part-time public health officer for that city, succeeding Dr. C. F. Mahood, who resigned because of ill health.

THE WEST VIRGINIA MEDICAL JOURNAL

302 ATLAS BUILDING, CHARLESTON, W. VA.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Editor
WALTER E. VEST, M. D.
955 Fourth Ave.
Huntington, W. Va.

Managing Editor and
Business Manager
MR. CHARLES LIVELY
Box 1031
Charleston 24, W. Va.

Associate Editors:
EDWARD J. VAN LIERE, M. D.
Morgantown, W. Va.
W. M. SHEPPE, M. D.
Wheeling, W. Va.
G. G. IRWIN, M. D.
Charleston, W. Va.
R. H. EDWARDS, M. D.
Welch, W. Va.

JAMES R. BLOSS, M. D., Editor Emeritus, Huntington

Vol. XLV MARCH, 1949 No. 3

HERPES ZOSTER OPHTHALMICUS*

Sodium Iodide Therapy

By T. W. MOORE, M. D.,
Huntington, W. Va.

Hutchinson, in 1866, first described herpes zoster ophthalmicus. This manifestation of herpes zoster is by no means rare, and its ophthalmic complications may prove so disastrous that the condition is worthy of special attention. Zoster is almost exclusively a disease of adults, especially of persons who are overworked or debilitated, or suffering from chronic constitutional disease. Usually it occurs in mild epidemic form, often in association with chickenpox, but it is also observed sporadically.

ETIOLOGIC AND PATHOLOGIC ASPECTS

Herpes zoster results from an acute inflammation affecting the ganglions, posterior roots, spinal nerves, sensory extramedullary ganglions, or the cranial nerves. Essential, true, or epidemic herpes zoster is now generally conceded to be a transmissible disease caused by a filtrable virus closely related to, perhaps even identical with, the virus of varicella. Clinically similar but differing etiologically from the epidemic form, symptomatic herpes zoster is essentially a neuropathic keratitis in which the eruption arises as the result of secondary involvement of the sensory nerve or posterior root ganglion in the course of such inflammatory, traumatic, or neoplastic lesions as those of syphilitic or tuberculous meningitis, tables dorsalis, a pontile tumor, or a basal fracture, with drugs also serving as an etiologic factor. On the basis of cause, cases are about equally divided between the two types, according to Lillie. Of the half described as symptomatic, about two-thirds are believed to be caused by syphilis.

Bokay, in 1888, suggested a relationship between herpes zoster and varicella. Clinically, it is observed that chickenpox may develop in children exposed to adults with zoster, and zoster may develop in adults exposed to children with chickenpox. Wise and Sulzberger concluded that zoster may be a relatively immune or allergic form of chickenpox occurring in those who have had previous acquaintance with the virus in the form of clinical or subclinical chickenpox, a theory that would explain the numerous phenomena associated with the relationship.

Opinion differs as to the mode of entrance and means of passage of the virus and also as to whether the virus localizes primarily in the ganglion or the skin and mucous membrane, or in both places. Too, the direction in which it travels is questionable. Packard contended that the virus has two phases, easily transmutable, the herpes zoster phase having its primary seat in a posterior root ganglion from which it may spread locally, involving adjoining nerves in the case of the gasserian ganglion, but having its main and normal extension along the sensory nerves to fibrous tissue covered by epithelium, where it reverts to the varicella phase. This theory explains the affections of the eye in herpes zoster ophthalmicus and also the epidemics of herpes zoster unaccompanied by varicella.

*Presented before the Logan County Medical Society, at Logan, May 7, 1947.

Although the pathology remains somewhat obscure, the chief action appears to be on the gasserian ganglion. From their comprehensive study, Head and Campbell concluded that the primary lesion is an acute round cell infiltration with areas of hemorrhage in the affected posterior root ganglions and that changes in the posterior nerve roots and spinal cord are secondary degenerative processes. When there was severe involvment, they noted, scar tissue replacement in the ganglion cells was present, with resulting trophic disturbances in the eye and other areas supplied by the nerve.

CLINICAL MANIFESTATIONS AND COMPLICATIONS

Of the three divisions of the trigeminal nerve, the ophthalmic, arising in the gasserian ganglion, is most frequently involved. The first symptom is likely to be severe burning pain in the eye and forehead on one side, which may be difficult to control, persisting not infrequently for weeks. In elderly persons especially, postherpetic neuralgia, severe and intractable, may persist for months or years. As a rule the eruption follows the onset of the pain by several hours or days and may be complete in three or four days. The vesicles may be distributed in clusters or uniformly and are almost always confined to one side. The course of the disease is acute, lasting from ten to thirty days, or longer. One attack nearly always confers immunity.

The seriousness of the disease lies in the ocular complications present in about half of the cases, and in their sequelae. They occur chiefly during the eruptive stage but may appear at any time, even weeks after the eruption has subsided. Keratitis involving the substantia propria of the cornea at various depths is the commonest complication and is associated with edema of the surface epithelium and wrinkling of Descemet's membrane. The separate opacities may become confluent and seldom clear completely. Iridocyclitis usually is present with the keratitis, and scleritis may develop. Atrophy of the iris may follow severe iritis. Occasionally there is phthisis bulbi, owing to atrophy of the uveal structures. Lowered or elevated intra-ocular tension may be present. Ocular palsies affecting especially the third, also the fourth and sixth nerves, not uncommonly cause defective ocular movement, and optic neuritis, fortunately a rare complication, may be followed by atrophy to the extent of abolition of the perception of light.

TREATMENT

Treatment varies widely, as do clinical results. The great array of remedies reflects the degree of efficacy of treatment. As for the eye itself, in the early stages the grossly swollen and exquisitely tender lids make examination and treatment extremely difficult. Irrigation, even if possible, may further damage the lids, but repeated instillation of oily bland drops may prevent their sticking. Symptomatic treatment is of course indicated for the ocular complications.

Sodium iodide appears to deserve a wider place in the list of therapeutic measures than it has won since Ruggles, in 1931, reported its apparent specific effect in a series of 15 cases, in 4 of which there was ophthalmic involvement. Tobias regarded it as the treatment of choice because of its effectiveness and dependability. Sulzberger and Wolf stated that sodium iodide, pituitrin and vitamin B have largely replaced older methods of treatment, but warned against iodine intoxication, iodine allergy and idoderma in the use of sodium iodide.

Nevertheless, wide inquiry on my part among my colleagues over the country has elicited little or no information regarding the use of this therapy, especially in doses as large as 2 Gm. Ruggles claimed only to have rediscovered the treatment after finding by chance a clipping ten or fifteen years old stating that a Doctor Richmond of El Paso, Texas, had cleared up a severe case of ophthalmic zoster in six days by administering two intravenous injections of sodium iodide. Thereupon, in treating a patient he injected 2 Gm. of the drug and was rewarded with amazing improvement the next day. His routine treatment thereafter was 2 Gm. of sodium iodide administered intravenously on the first, second, fourth and seventh days, and the results were uniformly successful.

For more than a decade my associates and I have been treating cases of herpes zoster ophthalmicus successfully by administering sodium iodide intravenously in 2 Gm. doses. The first patient thus treated, a Jew with diabetes, in his early sixties, was given 2 Gm. of the drug in 20 cc. of water intravenously on Jan. 24, 1933, and this therapy was repeated on January 25 and 27. After the third injection the pain ceased, the vesicles were drying up and only ointment for local application was needed. In this case zinc oxide ointment was prescribed. Thereafter, various ointments were used, but liquor *alumni acetatis*, or Burow's solution, now available in a refined and more stable form (Hydrosal) has come to be preferred by us in keeping the eruption moistened until crusts form. Then a bland ointment is applied, preferably ichthyol Gm.

0.15, zinc oxide Gm. 0.5 and white petrolatum Gm. 15.00.

Since the initial successful use of sodium iodide fourteen years ago, it has been employed routinely in our clinic in the treatment of the 4 or 5 cases observed annually and without evidence of contraindication in a single instance. In all of these cases, the condition has been relatively mild or in the early stages and has yielded readily to this therapy after the administration of two or, at most, three injections, except in one instance. The report of this severe case follows.

CASE REPORT

Mrs. R. W. G., aged 44 years, came to the clinic Jan. 17, 1945, complaining of pain over the left eye. She related that she had been frail throughout childhood, had had measles, whooping cough, chickenpox and smallpox during her eleventh and twelfth years and had been subject to sick headaches every two or three weeks since she had started to school. She had been married seventeen years, and there had been one pregnancy, but she had no children.

On April 29, 1942, this patient had first been examined at our clinic. At that time there was present a submental swelling in the midline which she had first noticed about six months before and which was slightly movable, nonfluctuating and with no foramen caecum on the tongue. Biopsy established the presence of a thyroglossal tumor which a general surgeon removed with good results although it was necessary to cut the hyoid bone. Because of the complaint of rheumatism, the patient was referred to the clinic six months later for tonsillectomy which was performed November 27. In February 1943, she was treated for chronic catarrhal otitis media which improved with catheterization and bouginage, and she returned Jan. 15, 1945, for treatment of this condition.

When she complained Jan. 17, 1945, of pain over the left eye, herpes was noted on the left side of the forehead. Treatment in the form of 20 mg. of thiamin chloride three times a day was prescribed. On January 19, blebs characteristic of herpes zoster covered the forehead on the left side, the eruption extending about 1/4 inch over the median line. Two grams (31 grains) of sodium iodide was given intravenously. Hydrosal was used for local application. On January 21, the fourth day after the cutaneous manifestation of the disease became apparent, the eruption was present on the lids of the left eye and had become confluent on the forehead. Swelling of the tissues was so pronounced that it extended across the entire forehead and involved the lids of both eyes so greatly that she could not open the eyes. A second intravenous injection of 2 Gm. of sodium iodide was administered at this time. Hospitalization was advised, but unfortunately no bed was available. On the following day, a third injection in like amount was given as the condition apparently remained unchanged. Some photophobia was present which disappeared as the swelling subsided. No corneal lesion was detectable although a satisfactory examination was not possible because of the edema.

On January 23 the swelling was subsiding and the eruption had become scabby. The patient could now open the eyes enough to enable her to move about unassisted. The previously mentioned bland ointment containing ichthyol and zinc oxide was prescribed. As she had been unable to relieve an obstinate constipation, having had no bowel movement in eight days, she was referred to her family physician.

Two days later, the herps zoster continuing to improve, she was again given 2 Gm. of sodium iodide intravenously. However, on February 5, the nineteenth day of the attack, she complained of having had pain over the site of the eruption all night, so severe that she could not sleep. For the fifth time since the onset, an intravenous injection of 2 Gm. of sodium iodide was given. The pain ceased within three and one-half hours after such administration. Recovery thereafter was without incident. It is worthy of note that this patient had had varicella in childhood.

SUMMARY

Herpes zoster ophthalmicus is encountered frequently enough in practice to warrant particular attention. Ocular complications are so serious that failure to recognize the condition early and treat it promptly may result disastrously.

In treatment, sodium iodide merits special consideration. In all of the cases treated at our clinic over a period of fourteen years, this drug in 2 Gm. doses has proved an effective therapeutic agent. Two or, at most, three intravenous injections of 2 Gm. each, usually on alternate days, have sufficed in every instance, with the exception of the severe case herein reported.

REFERENCES

Bokay, cited by Baird, P. C.: Herpes Zoster, New England J. Med. 228:568-577 (May 6) 1943.

Head, H., & Campbell, A. W.: Pathology of Herpes Zoster: Its Bearing on Sensory Localizations, Brain 23:353-523, 1900.

Hutchinson, J.: R. L. O. H. Rep., v, 191, 331, 1866; 46, 181, 263, 1869, cited by Paton, L.: Trigeminal

COLLEGE OF PHYSICIANS OF PHILAD

Herpes and Its Ocular Lesions, Brit. J. Ophth. 10:305-342, 1926.
Pickard, R.: The Causation of Herpes Ophthalmicus, Proc. Roy Soc. Med. 28:29-33 (Nov.) 1934.
Ruggles, E. W.: Apparent Specific Effects of Sodium Iodide in Herpes Zoster, Preliminary Report, Arch. Dermat. & Syph. 23:472-476 (March) 1931.
Sulzberger, M. B., & Wolf, J.: Dermatologic Therapy in General Practice, Chicago, The Year Book Publishers, 1942, p. 357.
Tobias, N: Essentials of Dermatology, Philadelphia, J. B. Lippincott Co., 1941, p. 173.
Wise, F., & Sulzberger, M. B.: Year Book of Dermatology and Syphilology, Chicago, The Year Book Publishers, 1938.

USE FOR RADIOACTIVE ISOTOPES

There has been much publicity regarding radioactive contamination of the earth following the explosion of an atomic bomb. The physicists with whom I have talked feel that the atomic bomb is a powerful and destructive bomb whose greatest danger lies in its blast effect. If sufficiently large numbers are used to cause contamination of the earth, it will be of less concern than the blast because the immense destruction will leave little to be affected by the later hazard of irradiation.

On the constructive side, radioactive and heavy isotopes give us another means of attacking the problem of cancer, and progress with their use has already been made in therapy and diagnosis and in the understanding of the cancer cell. In the field of the radiation therapy of cancer, further advances will be made with the aid of radioactive isotopes, but their great contribution will undoubtedly come from their use as tracers of metabolic processes.—John H. Lawrence, M. D., in Rock Mountain Medical Journal.

MENTAL HEALTH IN THE CHILD

Heredity plays a major role in the development of the growth processes. Physical characteristics of the parents are usually transmitted to the children. This development is part of the influence ordained by nature, and, as yet, no real medical contribution has been advanced to alter the tendency.

The mental growth process of the child, however, can be altered appreciably so that a youngster who has become intractable can be guided, through social and emotional adjustment, to normal mental health when he reaches maturity.

While children's behavior problems fall into many categories, all can safely be classified under a form of escape. A child who has been coddled at home, foregone such baby discipline as putting toys away, getting ready for bed without a whimper, or sharing toys with a neighbor, is apt to show the same selfish arrogance when entering school for the first time. Even though the obstinacy or refusal to obey brings on punishment, the child has gained the attention of parents or teachers and it is this habit which, if permitted to develop, will produce a selfish, maladjusted adult.

To help guide the child into good mental habits, one should watch carefully his emotional changes or behavior patterns while in infancy and babyhood. The basic patterns established in the young, unless controlled and converted, will develop through the years, taking shape in frustration, violence, disobedience and other signs of social maladjustment.—Health Talk, Illinois State Medical Society.

EXPERIENCE WITH LUMBAR SYMPATHECTOMY IN VASCULAR DISEASES OF THE LOWER EXTREMITY

By CHARLES D. HERSHEY, M. D.,*
Wheeling, W. Va.

Increasing interest has been shown in recent years in measures producing increased arterial circulation in the extremities by interruption of the sympathetic nerve pathways. In the lower extremity the most effective and permanent method of producing vasodilatation and increasing blood flow is lumbar sympathectomy. At one time arterial sympathectomy was thought to be an adequate procedure but for the most part it has been abandoned because of the fact that the sympathetic denervation following its use is incomplete and of relatively short duration. It has been known for some time that vasospasm is an accompanying factor in several organic vascular diseases of the extremities. In many instances this added factor is sufficient to cause tissue changes beyond those which would be caused by organic arterial disease alone. Therefore, interruption of the sympathetic activity in well selected cases will result in improved circulation and avoidance of gangrene, ulceration and cellulitis. Many individuals incapacitated because of claudication and other sequelae of peripheral ischemia have been rehabilitated and returned to normal ways of life by this procedure. The ensuing discussion is concerned with the application of this operation in 34 cases in which a total of 41 lumbar sympathectomies were performed. Each disease condition will be considered individually, and the cases in which adequate follow-up data is available will be concisely evaluated without attempting to delve into a detailed history of each.

BUERGER'S DISEASE

In thromboangiitis obliterans the organic vascular occlusion is usually disseminated in the arteries of the extremity, yet there may be a large element of arteriospasm present. This associated vasospasm is more evident in the early phases of the disease but is also frequently in evidence in the more advanced cases as indicated by the beneficial response to sympathectomy even in the presence of gangrene. Sympathectomy will not of course cure the disease, but in many instances will postpone the development of gangrene for many years and relieve the intermittent claudication which is so disabling. In some instances amputations will still be necessary but can be carried out at lower levels than would

*From the Department of Surgery, The Wheeling Clinic, Wheeling, W. Va.

ordinarily have been possible. The present series includes four individuals with Buerger's disease treated by lumbar sympathectomy.

Case 1 is a white male, aged 40 years, having gradually increasing claudication in the calves of both legs. Dorsalis pedis and posterior tibial pulses were absent bilaterally. He was not able to walk one city block without having to stop and rest because of severe cramps in the legs. Bilateral lumbar sympathectomy was performed Sept. 8, 1947, with immediate warming of both lower extremities and complete relief of the claudication. At the present time, one year since the operation, he walks nine blocks to work without pain or other symptoms related to the leg.

Case 2 is a white male, aged 55 years, giving the history of mild cramping in the calf of the right leg for three years, with gradual increase in the symptoms until finally he could walk only one block before the leg pain became so severe that he had to stop and rest. X-rays of the feet revealed no evidence of arteriosclerosis. Dorsalis pedis and posterior tibial pulses were entirely absent in the right foot although they were very faintly palpable in the left. Paravertebral sympathetic block on the right side produced a 2 degree Centigrade rise in the skin temperature of the foot. He was also able to walk six blocks without the development of claudication. His symptoms returned the following day, however. Right lumbar sympathectomy was performed June 8, 1948, and this was followed by immediate warming of the right lower extremity. At the present time, five months postoperatively, he is able to walk almost indefinitely without experiencing the previous symptoms. Because of similar arterial changes in the opposite leg which at the present time are asymptomatic, he will undoubtedly later require a sympathectomy upon the opposite side.

Case 3, a Polish male, aged 38 years, presented himself with an infection in the left little toe which had been present for approximately eight weeks and which showed no signs of subsiding. Upon examination the pulses in the left foot were entirely absent and only the dorsalis pedis pulse was palpable in the right foot, and this was extremely weak. X-rays revealed no evidence of arteriosclerosis. He gave the interesting history that he had fought in the Polish Army in World War II, and had been captured by the Russians and sent to Siberia for fourteen months where the temperature was 80 degrees below zero. He did not believe that his feet had been frozen at any time, but of course with his arterial disease he did not get along well in the cold climate. A diagnosis of Buerger's disease was made and bilaterial lumbar sympathectomy was carried out, with apparent warming of both lower extremities. It was later necessary to amputate the fifth toe because of osteomyelitis in the proximal phalanx, but this healed quite satisfactorily and unusually well for a person with vascular disease.

In case 4, the patient was admitted to the Ohio Valley General Hospital in September 1947, with marked purplish discoloration of the toes of the left foot and absence of the dorsalis pedis and posterior tibial pulses in that foot. The pulses in the right lower extremity were entirely normal and there was no evidence of vascular disease in the right leg. A diagnosis of Buerger's disease was made and left lumbar sympathectomy was performed Sept. 27, 1947. There was evident warming of the skin of the entire left lower leg and a portion of the foot following sympathectomy. It was later necessary to amputate several toes of the left foot because of gangrene. However, the patient still complained of pain in the distal portion of the foot and crushing of the deep and superficial peroneal nerves was performed to relieve this pain. This operation was only partially successful. When the pain had subsided sufficiently the patient was discharged from the hospital Nov. 7, 1947. On April 2, 1948, he was readmitted to the hospital complaining of severe pain in the distal portion of the foot with bluish discoloration in the areas where the toes had been amputated. A low leg amputation was done April 15, 1948, and the amputation stumps healed quite satisfactorily. In this case a major amputation was still necessary but sympathectomy in all probability made it possible to carry out the amputation at a much lower level than would otherwise have been possible.

PERIPHERAL ARTERIOSCLEROSIS

At first thought one would not expect that a great deal of benefit would be derived from sympathectomy in the presence of ateriosclerosis of the peripheral arteries. In such cases there is an organic occlusion of the arterial lumen with considerable rigidity of the walls. However, experience has shown that in spite of the advanced organic arterial change there still are many small arteries and arterioles which will dilate if the sympathetic stimulus is removed. Smithy has pointed out that there are three phases of arteriosclerotic ischemia which respond favorably to sympathetic nerve interruption: (1) impending gangrene, (2) chronic ulceration of the feet and (3) intermittent claudication. It is fre-

quently surprising how impending gangrene in some of these individuals will disappear following sympathectomy. Even when gangrene is present there is often a rapid demarcation of the process after sympathectomy and amputation at a lower level than would ordinarily have been possible can be performed. Particularly gratifying to the patient is the relief of pain.

In the present series there were seven patients with peripheral arteriosclerosis treated by lumbar sympathectomy, the operation being performed bilaterally in one case. Case 1 is a white Jewish male, aged 67 years, who was admitted to the Ohio Valley General Hospital August 25, 1947, complaining of constant, severe pain in the second toe of the left foot. The toe had the purplish-red color of impending gangrene and there was an ulcer at its tip. The patient had been treated conservatively with little or no benefit during a recent admission to the hospital. A diagnosis of peripheral arteriosclerosis with impending gangrene of the left lower extremity was made and left lumbar sympathectomy was performed August 28, 1947. Following operation there was slow but steady improvement. The pain disappeared, the ulceration healed, and the discoloration of the toe vanished. It now has been over a year since the operation and he has had no recurrence of symptoms or signs in the left lower extremity. However, he presented himself at the Wheeling Clinic March 31, 1948, complaining of pain in the third and fourth toes of the opposite foot. Ulcers were present on these toes. They again presented the appearance of impending gangrene. The sympathectomized left leg was considerably warmer to palpation than the unoperated side and the toes appeared of normal color. He was again admitted to the hospital and right lumbar sympathectomy was performed April 5, 1948. He was discharged from the hospital shortly thereafter and returned to the Clinic for reexamination one month later, at which time the ulceration on the toes had entirely healed although there was some bluish discoloration still present. The foot was warm, however. He was again seen September 4, 1948, complaining of pain in the right fourth toe. There was a small ulcer of the fourth toe, with purplish discoloration of the skin. There has been some slight improvement in the toe since but it is still painful and amputation may be necessary later. However, in this case toe amputation can be performed with relative safety and with expectancy of good healing.

Case 2 is a white male, aged 51 years, who was found to have peripheral arteriosclerosis as well as chonic thrombophlebitis of the right lower extremity. He was complaining of cramping in the calf of the right leg. Supportive bandaging of the leg controlled the swelling satisfactorily but the claudication was disabling. Following lumbar sympathetic block on the right side, using 2% novocain, there was a decided increase in warmth in the extremity and the patient was able to walk a considerable distance with an absence of claudication. Therefore, right lumbar sympathectomy was performed with complete relief of the pain and a very evident increase in skin temperature of the right lower extremity. He has remained completely relieved of his symptoms since the operation and has returned to work.

Case 3 is a white male aged 68 years, who stated that he had recently had a plantar wart of the right foot excised, which was followed by infection of the foot and gangrene of the fifth toe. The right foot was markedly swollen and red, with obvious gangrene of the fifth toe. Both dorsalis pedis and posterior tibial pulses were absent in both feet. Treatment first consisted of wet boric compresses to the foot plus the administration of penicillin, with some improvement in the infection. The right fourth and fifth toes were amputated and, subsequent to amputation, right lumbar sympathetic block was done at daily intervals. It was felt that there was considerable improvement in the wound and some increase in the warmth of the leg and foot as a result. Therefore, right lumbar sympathectomy was performed and it was noted that the granulation tissue in the wound became pinker within twenty-four hours after this procedure. It was possible to discharge the patient from the hospital ten days later at which time the open amputation wound in the foot was healing very satisfactorily. In this case gangrene of the fourth and fifth toes was present upon admission but it is felt that the foot was saved as the result of sympathectomy, whereas a supracondylar thigh amputation would ordinarily have been performed.

Case 4 is a 48 year old male complaining of severe claudication in both calves, worse in cold weather. Posterior tibial pulses were present but the dorsalis pedis pulses were absent. Following bilateral lumbar sympathectomy one year ago he has been completely relieved of his symptoms. He stated that last winter was the first time he had been able to walk as far as he wished in cold weather without experiencing severe claudication. Also, following the operation, the dorsalis pedis pulses became faintly palpable.

Case 5 is a white male, aged 62 years, upon whom an adequate follow-up has not been ob-

tained. Sympathectomy was performed because of peripheral arteriosclerosis with absent pulses and an area of gangrene the size of a dime on the dorsum of the right foot, the result of an electric spark burn one week previously. He was discharged one week later, at which time there was increased warmth in the foot and disappearance of the pain, with beginning healing of the area of gangrene. The only follow-up data available on this patient is a letter written six months later in which he complained of pain in his hips, back and head, but no reference was made to the lower extremities.

Cases 6 and 7 can be dealt with briefly as both were failures in so far as sympathectomy is concerned. Both patients were in their sixth decade of life and exhibited impending gangrene of one foot. Sympathectomy was performed with slight immediate improvement in one case and no improvement in the other. Leg amputation was later necessary in both cases.

DIABETIC ARTERIOSCLEROSIS

Smithwick has pointed out that arteriosclerosis with diabetes is less likely to be associated with vasospasm than are other forms of peripheral vascular disease, and this has been the author's experience for the most part. However, if previous studies indicate that some improvement might be expected from sympathetic interruption, I feel that this should be done since the patient has considerable to gain and little to lose. In the present series of cases three persons with arteriosclerosis associated with diabetes were operated upon, bilateral sympathectomy being performed in one case.

Case 1 is a white female, aged 47 years, who had previously had a left supracondylar thigh amputation for diabetic gangrene of the foot. She was admitted to the Ohio Valley General Hospital in December 1947, complaining of severe pain in the right foot and lower leg. The peripheral pulses were absent but the femoral pulses were easily palpable in the groin. Preliminary lumbar sympathetic block revealed an increase in skin temperature of the foot and lower leg. Upon this basis, right lumbar sympathectomy was performed, followed by immediate relief of the pain. It has now been eleven months since the operation, she has had no recurrence of symptoms, and is getting around well in spite of the fact that the right leg is carrying a heavier load than previously because of the amputated left leg.

Case 2 is a white female, aged 60 years, who was known to have had diabetes for nineteen years. She entered the hospital complaining of very severe pain in the left leg. Upon examination the leg was cold and white from the midportion down to the toes. Sympathetic block resulted in a 1 degree Centigrade rise in skin temperature of the left foot and leg. In an effort to save the leg left lumbar sympathectomy was performed. The pain was relieved for three days, but then the coldness returned along with the pain. The line of demarcation in the midportion of the lower leg was more pronounced although there was no definite evidence of gangrene at the time. It was possible to discharge her from the hospital later, however, at which time the pain was considerably improved. She was again admitted to the hospital three months later with gangrenous ulcers of the foot and it was necessary to perform a supracondylar thigh amputation. Inspection of the amputated leg revealed that the intima of the popliteal artery had broken loose at one portion and plugged its lumen.

Case 3 is of too recent occurrence to properly evaluate. Bilateral lumbar sympathectomy was performed for the relief of very severe diabetic arteriosclerosis with a gangrenous slough of the right heel. It was possible to discharge the patient from the hospital two weeks later with the heel showing some signs of healing.

PERIPHERAL ARTERIAL EMBOLISM AND THROMBOSIS

The treatment of choice for embolism in a major peripheral artery is embolectomy, but in many instances this procedure is not feasible. In all instances, sympathetic interruption, either in the form of lumbar sympathetic blocks or sympathectomy, should be done in order to release the vasospasm and increase the collateral arterial circulation. In many instances sympathetic interruption can be combined with refrigeration to considerable advantage, not only in improving the collateral circulation but also in the relief of pain.

In the series under consideration there were no cases of arterial embolism treated by sympathectomy, but one case of thrombosis of the external iliac artery due to trauma was so treated. The patient was a white male, aged 64 years, entering the hospital after having been kicked in the left groin by a horse. The left lower extremity was cold, and no peripheral pulses were palpable, not even the femoral pulses in Scarpa's triangle. It was felt that a thrombosis in the left external iliac artery had developed and hemorrhage in the area above the inguinal ligament as a result of the trauma. There were no signs of gangrene, however, and lumbar sympathetic block resulted in warming in the lower extremity. He was treated conservatively for a

while with the result that the pain in the leg was completely relieved, although the lower extremity was still cold to palpation, and he could walk only a short distance. He was discharged from the hospital but returned ten days later complaining of severe pain in the calf and thigh, and stating that he could walk only a few steps before experiencing severe cramping pain in the leg. The left lower extremity was very cold and the peripheral pulses were still absent. Left lumbar sympathetic block resulted in warming of the entire left leg and complete relief of the pain. Therefore, upon the following day left lumbar sympathectomy was done, removing the ganglionic chain from lumbar ganglia one to four inclusive. This resulted in warming of the leg which has been maintained ever since. The pain has been relieved and his only complaint at the present time is of pain in the left hip, and this is felt to be the result of the original trauma to the pelvis.

DEEP THROMBOPHLEBITIS

Sympathetic interruption has been of established value in cases of acute inflammatory thrombophlebitis in which there is considerable swelling of the extremity. This eliminates the vasospasm which is largely responsible for the swelling and pain. A much more troublesome form of the disease, however, is the chronic stage in which many variable manifestations are seen. These patients have persistent swelling of the extremity and may exhibit several of the many complications of chronic thrombophlebitis such as ulceration, cellulitis and recurrent episodes of phlebitis with accompanying pain in the extremity. Sympathectomy has proved to be of great value in many of these patients exhibiting the complications of the disease. It has little to offer, however, to the patient complaining of swelling alone with no evidence of inflammatory process remaining in the extremity. In the presence of ulceration, recurrent cellulitis and severe persistent pain in the leg, sympathectomy has much to offer. Ulcers will heal in most instances following this procedure and it is felt that this result is due not only to the increased arteriolar circulation with elimination of the local tissue anoxia but also to the absence of sweating of the extremity following sympathectomy. The swelling will be eliminated or decreased only in exceptional cases, but pain usually will be abolished because of the elimination of hypoxia.

In the present series, lumbar sympathectomy has been employed in 16 individuals with chronic deep thrombophlebitis. Follow-up data in four of these cases is not available. The results in the remaining 12 patients will be briefly given for each individual instance. Some of the patients were benefited in respect to certain symptoms but unbenefited in others.

Case 1 is a white female aged 18 years, with thrombophlebitis of one and one-half years' duration. Both pain and swelling completely disappeared immediately following sympathectomy combined with common iliac vein ligation, and there had been no recurrence of either of these symptoms when she was last seen one year after operation. This is the only case in the series in which the swelling completely disappeared.

Case 2 is a white female, aged 50 years. Four months after sympathectomy there was complete absence of the pain and only a minimal degree of swelling of the foot and ankle.

Case 3 is a white female, aged 28 years. Sympathectomy was performed because of persistent pain following thrombophlebitis of the left leg. Two years later she was having no pain and the left calf was only one-half inch larger in diameter than the normal right calf.

Case 4 is a white male aged 29 years. Sympathectomy was performed because of chronic deep thrombophlebitis of three years' duration, with an ulcer on the lateral aspect of the lower leg which would not respond to conservative treatment. Following sympathectomy the ulcer healed and has remained so. The pain and heavy sensation have disappeared but there has been only slight diminution of the swelling.

Case 5 is a white male, aged 43 years, with bilateral chronic deep thrombophlebitis with ulceration in the lower extremities. After sympathectomy the ulcers healed promptly and the pain has been absent. Swelling is unaffected.

Case 6 is a white male, aged 67 years, with bilateral chronic deep thrombophlebitis accompanied by varicose veins and huge ulcers of both lower legs. The ulceration involved over 50 per cent of the surface of each leg. Bilateral lumbar sympathectomy and saphenous vein ligation were performed. At the present time, six months postoperatively, the huge ulcers have healed except for two extremely small points, and there is absence of the pain. The patient had been incapacitated before treatment but has resumed his occupation as a druggist.

Case 7 is a white female, aged 45 years. Bilateral lumbar sympathectomy was performed for the relief of bilaterial chronic deep thrombophlebitis. The patient has been improved in so far as the pain is concerned although she has had two flare-ups of phlebitis in the two and one-

half years since sympathectomy. Ulceration has not occurred, and both extremities have remained warm and dry.

Case 8 is a white male, aged 64 years. Six months following sympathectomy there was definite diminution in the swelling of the leg. He still had some cramping sensation in the left lower leg but this was diminished. His chief complaint was of pain in the foot and heel which was attributed to an old fracture of the os calcis.

Case 9 is a white male. Right lumbar sympathectomy combined with right common iliac vein ligation was performed. Six months later the patient stated that he was improved in two respects: First, he was able to walk farther and with less pain and, second, the heavy sensation, although still present to a certain extent, was decreased considerably. The swelling was unimproved.

Case 10 is a white female, aged 46 years. Sympathectomy and common iliac vein ligation were performed for persistent pain and swelling. When the patient was last seen, four months later, there was complete absence of pain although the swelling was changed very little.

Case 11 is a white female, aged 59 years. Left lumbar sympathectomy and left common iliac vein ligation were performed. When last seen, one year later, there had been disappearance of pain with only a very small degree of swelling.

In case 12 bilateral phlebothrombosis developed following a fracture of the spine for the relief of which ligation of the vena cava was performed, the right lumbar sympathetic chain being removed at the same time. For two years following operation he had a moderate degree of persistent swelling in both legs, but this was not particularly bothersome. An ulcer recently developed over the right ankle in spite of the fact that this was the sympathectomized leg. In this instance, sympathectomy failed to prevent ulceration.

MISCELLANEOUS

In three instances sympathectomy was performed for the cure of other diseases involving the extremities. One is a case of Sudeck's atrophy occurring after a severe injury of the foot. Lumbar sympathectomy relieved the pain for a period of three months, but at the end of that time there was recurrence of the pain in the calf. When the patient was last seen, nine months after operation, he stated that the pain was not bad during the daytime but that it became quite severe after he came home from work at night. However, the involved leg was still warmer than the opposite extremity although osteoporosis was present on x-ray examination. It has been three years since he was last seen, and attempts to obtain more information relative to his condition have failed.

Another case is a 27 year old female with a chronic ulcer over the medial malleolus of the right ankle of eight years' duration. There were no varicosities present and no swelling of the extremities. The dorsalis pedis pulse was absent in the right foot and very faint in the left. Posterior tibial pulses were greatly diminished. It was felt that she had some type of peripheral arterial disease but there were none of the color changes which could be attributed to Raynaud's or Buerger's disease. Because of her youth it was not felt that this was a peripheral arteriosclerosis. Lumbar sympathectomy was done and resulted in immediate healing of the ulcer which has remained healed to date, ten months after the operation.

The other instance was a 20 year old girl upon whom a Wertheim operation had been carried out for the cure of carcinoma of the pelvic organs. Following this procedure severe pain developed in the entire right lower extremity. Lumbar sympathetic block on the right side relieved the pain temporarily. Lumbar sympathectomy was done in an effort to give palliative relief but was of very little benefit in this case.

SUMMARY

The results in 41 lumbar sympathectomies upon 34 patients with peripheral vascular disease have been presented. The operation was performed on four individuals with Buerger's disease with a very good result in three cases. In the fourth instance, amputation was still necessary but could be done at a lower level than would have been feasible otherwise.

Seven patients with peripheral arteriosclerosis are included with a good result in four instances, failure in two, and inadequate follow-up in one.

Three patients with diabetic ateriosclerosis were operated upon with a good result in one case, failure in one, and in the third case insufficient time has elapsed for evaluation.

One case with thrombosis of the left external iliac artery was treated by sympathectomy with a very good result.

Sympathectomy is recommended in deep thrombophlebitis exhibiting one or more of the complications of the disease such as ulceration, recurrent cellulitis and recurring episodes of phlebitis with pain in the extremity. It is not

indicated in cases in which swelling is the only complaint. Lumbar sympathectomy was performed upon 16 individuals with this disease in this series. Follow-up data in four of these cases is unavailable. In the remaining 12 cases swelling disappeared in only one instance, with improvement in two cases. All cases having ulcers at the time of operation have demonstrated complete healing of the ulceration. In one instance, however, an ulcer appeared two years later. Pain in the extremity disappeared in all cases except two and in these instances there was some improvement in this respect.

There were no deaths in this series. The only morbidity was that present in two cases complicated at the time of operation by severe bleeding from one of the lumbar veins, requiring packing. Both were patients with chronic thrombophlebitis which condition may have contributed to the bleeding at the time of operation. In most instances the second, third and fourth lumbar ganglia were removed and in some instances the first also.

CONCLUSIONS

Lumbar sympathectomy is the most effective method of obtaining vasodilatation in the lower extremities. It is indicated in certain cases of Buerger's disease, peripheral arteriosclerosis, chonic deep thrombophlebitis and peripheral arterial embolism and thrombosis, as well as in rare instances of Raynaud's disease of the lower extremities and in certain cases of nonspecific ulceration of the extremities. Emphasis is placed upon a careful evaluation of each individual case, particularly with reference to skin tempature studies, in order to eliminate those with little chance for beneficial results. As there was no mortality in this series of 41 cases, it is evident that lumbar sympathectomy is a safe procedure and may be used with anticipation of good results in a high percentage of well selected cases.

ANESTHESIOLOGY

A relatively new specialty has blossomed forth in medicine and is encountering "growing pains," trials and difficulties. Anesthesiology has passed through the infant age and may be correctly designated now as being adolescent. In one sense we may even regard its development as precocious.

The late war has made the specialty conspicuous, if no previous sequence of events or episodes have done so. The statement that anesthesiology is "over sold" is probably true. At the moment qualified anesthesiologists are in great demand and there are not enough of them to supply the demand, let alone the minimum needs or requirements of hospitals in this country.—Ed. B. Tuohy, M. D., in Conn. St. Med. Journal.

HISTAMINE DIPHOSPHATE USED TOPICALLY IN THE EYE*

By EDWIN M. SHEPHERD, M. D., F. A. C. S.,
Charleston, W. Va.

Introducing the use of any drug for the eye to those who have not used it poses immediately the question of its safety. I have used histamine diphosphate topically in the eye in more than a hundred cases and cite Estable, also Sherman and Feldman, who have used it experimentally both in animal and human eyes and to date no uncontrollable deleterious effects have been reported.

Histamine is a natural body product formed by the tissues and opposed by the naturally occurring histaminase, a product found chiefly in the kidney and small intestine. My own work indicated that repeated instillations in the eye lead to tolerance that is slow to form and can be overcome by increasing the dose. Its local effects can be counteracted very quickly by "Adrenalin" 1/1000 or ephedrine sulphate 5 per cent.

The ability of histamine to dilate both capillaries and arterioles and its stongly miotic effect have been the two physiologic actions that have held my attention. I have used its vasodilating effect as a substitute for dionin and its miotic effect to shift the pupil in certain cases. This miotic effect is due to a direct stimulation of the sphincter fibers. This attribute of histamine is shared by ergotoxin, barium, strontium, potassium ions and morphine.

Histamine diphosphate 1/1000 or 1/4000(0.275 mg/cc) dropped into the conjunctival sac produces a stinging sensation which lasts about ten to twelve seconds and is followed by a generous conjunctival blush. The blush is fully developed in about forty-five seconds. Rarely the conjunctival blush will be accompanied by a chemosis of considerable proportions. The blush effect fades spontaneously over a period of three to eighteen hours. The one time I succeeded in producing chemosis of suffcient extent to protrude beyond the palpebral border, Metaphen ointment (1/3000) and a pressure patch on the eye brought relief in twelve hours. Trial on a patient who suffered a proven histamine headache failed to produce the headache or any real chemotic effect by repeated instillations of the drug. The routine conjunctival blush produced could be wiped out in a few seconds with a drop of 5% ephedrine sulphate.

While on the resident staff at Bellevue Hospital in New York City in 1940 under the direc-

*Presented before the annual meeting of the West Virginia Academy of Ophthalmology and Otaloryngology, at White Sulphur Springs, September 21, 1948.

tion of Dr. Dan Kirby, we experimented with histamine and showed that it would oppose the effect of atropine. Miosis was produced in a glaucomatous patient who had been atropinized by a practitioner outside the Hospital. Although the miosis was produced promptly, there was no lessening effect on the glaucoma and a relieving operation was done immediately. Recently in treating an optic neuritis with a secondary mild glaucoma after dilatation with atropine, we used histamine diphosphate and produced a miosis but no immediate effect in the glaucoma. However after about four hours there was an appreciable drop from 35 (Schiotz) to 30. This effect may well have been due to the vascular response and certainly was not coincident with the miosis. My feeling at present is that the miotic effect is offset by the vasodilatation which sends more fluid into the eye. The latent drop in tension occurring four hours after instillation may have some characteristics in common with adrenalin when it is used to control some glaucomas. The opportunities for studying the effect of histamine miosis in glaucoma are few and any conclusions at this time are pure speculation. Glaucoma secondary to iritis with a blocked angle might conceivably be spared iridectomy with the use of histamine.

In 1946 we had a case of chronic recurrent iritis with posterior synechia. The eye was atropinized and the inflammation continued in spite of repeated foreign protein injections. Histamine produced a miosis and we followed this with an adrenalin pack. This shifting maneuver broke some of the more medially placed synechiae and the eye quieted in the next twenty-four hours. A recent case, however, failed to respond with any miosis after repeated instillations of histamine. A 26 year old negro with relapsing secondary lues and plastic iritis was sent to us from the Kanawha Valley Medical Center. He had been atropinized and we wanted to break the posterior synechiae that had formed. One cc. of 1/1000 histamine diphosphate was dropped on the cornea, a few drops every five minutes over the space of an hour and one-half. No miosis was produced. A half cc. of adrenalin in the subconjunctiva produced no further mydriatic effect. One week later when the iritis was quiet and the pupils had recovered to near normal a trial with adrenalin again produced very little mydriasis even though the pupils were responsive to light and accommodation. I have no explanation for this failure.

We have not seen miosis produced by histamine 1/1000 dropped once or twice into the conjunctival sac, but only after repeated instillations over a period of at least twenty minutes. The minimal miotic dose and minimal time to produce the miosis, we have not established. Estable, incidentally, states that rabbits show a marked tolerance of histamine placed in the conjunctiva and requires a 1/200 strength to produce a vasodilating effect. He does not mention miosis.

As a substitute for dionin it does produce a generous conjunctival flush and shows only a slowly developed tolerance. This tolerance can be overcome by increasing the number of instillations. We have one case that reacted dramatically to histamine used as a substitute for dionin. A 55 year old white woman who had had herpes zoster involving the cornea along with the supraorbital branch of the fifth nerve acquired a corneal leucoma in the process. Her vision was shut down to 20/50 in that eye. After flushing the conjunctiva daily for two weeks with histamine diphosphate 1/1000, her vision returned to 20/20. The leucoma was visibly thinner but not totally cleared. She writes from her home in the country for periodic renewals of her histamine supply. This she uses three times weekly and claims that without it her vision tends to fail. We have not seen any miosis from this low dosage and the effect is not from pinholing the iris. Although we have used histamine in a number of cases of cataract and in other cases of corneal leucoma no others have responded with sufficient effect to justify further comment.

The dramatic response of episcleritis to histamine is enough to justify its inclusion in any ophthalmologist's drug list. Within fifty seconds of instilling a few drops of histamine over an episcleric node, the tenderness and the pain are gone completely. The node can be freely palpated and if any residual tenderness is found a few more drops of the drug will eliminate this. The relief thus obtained will last from four to eighteen hours and can be obtained again when needed by reinstillation of the drug. The cases thus far studied are not only relieved of pain but in all but one instance have cleared in three days or less. The one exception occurred this past year in a 38 year old white male who had low grade episcleritis of three weeks' duration in his left eye. The more usual therapy of hot compresses and salicylates had been used. Histamine gave immediate symptomatic relief and kept him comfortable for about eighteen hours. He left our care free of pain but with a slightly red eye. Two months later the eye was white and he promised to have a bad set of tonsils removed. We believed the tonsils to be the

source of his trouble. This case was more persistent and less painfully acute than any case we have previously handled.

Relief of episcleritis by histamine should be divided into two phases. First, the immediate relief of pain and, second, the final resolution of the condition. An explanation of the first is simple, I believe. The vasodilatation affords a lateral release of pressure which the episcleritis is exerting in one spot analogous to the pressure of an intradermal injection. That this is a reasonable assumption is attested by the fact that the cessation of pain is coincident with a full flush of the conjunctiva and any failure to achieve complete relief can be remedied on the spot by additional histamine and a more generous flushing of the vessels. There is no locally anaesthetic effect in histamine and this we have checked with cotton wool immediately after relieving the episcleritic pain.

The second phase of action of histamine on episcleritis, that of causing a resolution of the condition, is involved in speculation. Duggan believes that scleritis and episcleritis have a primary vascular origin and are manifestations of acute localized tissue anoxia caused by increased capillary permeability or arteriolar spasm, or both. The early pathologic changes are basically the same as those found in retrobulbar neuritis, acute exudative choroiditis and uveal tract disease. Treatment of five cases with vasodilators gave beneficial results for Duggan. He further states that a primary histamine origin might be worthy of consideration. To these speculations I can only add my own. I believe that histamine owes its effectiveness to its efficiency as a vasodilator, bringing to the diseased tissues the blood and lymph bath necessary for healing. What specific agent the blood or lymph may carry I do not pretend to know. A second possibility that histamine calls out an increased flow of histaminase and by that means clears a condition of primary histamine origin would be a logical deduction if the premise is correct. One of my cases might support this. An infantryman reported to the hospital in England, where I was stationed, with episcleritis, tender and painful around a small imbedded fragment of shell. Slitlamp examination showed no pus around the fragment which was visible in the depth of the episclera. This fragment had been in place about a week. Histamine gave immediate symptomatic relief and the fragment was removed three days later from a white eye.

Histamine is an efficient palliative for episcleritis. The long range curative effect needs closer scrutiny and until more telling proof to the contrary is presented, episcleritis as a condition secondary to allergy, focal infection, exposure to cold, or tuberculosis still warrants careful consideration.

In summary, histamine diphosphate 1/1000 or 1 4000 solution instilled directly into the eye will produce: (1) dilatation of both capillaries and arterioles and (2) miosis after repeated instillations.

These physiologic actions can be used (1) as a very effective palliative and possible cure for episcleritis, (2) to contract the pupil strongly even in the presence of atropine dilatation and (3) as a substitute for dionin.

The usefulness of histamine in the field of ophthalmology warrants further investigation. This paper in some measure highlights the limitations of the doctor in private practice making any constructive explorations in original clinical research. The possibility that as a state organization we could coordinate our efforts and pool our results might eventuate in our bringing forth a real and impressive mass of data.

BIBLIOGRAPHY

1. Duggan, W. F.: Role of Anoxia in Production of Episcleritis and Scleritis, Treatment with Vasodilators, Arch. Ophthalmology 25:113-121 Jan. 1941.
2. Shepherd, E. M.: Relief of Episcleritis by Histamine Diphosphate, Am. Journal Ophthamology 30:907-909 July 1947.
3. Estable, Jose J.: Ocular effect or irritant drugs—histamine biphosphate. Am. Journal Ophthalmology 31:840 July 1948.
4. de Grosy, Stephen: Letter to Editor Am. J. Oph. states use in 1935 of histamine diphosphate 1/10,000 by ionization in treatment of episcleritis. Am. Journal Ophthalmology 31:881 July 1948.
5. Sherman, H., & Feldman, L.: Hypersensitiviness of the mucous membranes; IV Effect of local reactions elicited by specific and non specific excitants on ophthalmic mucous membranes in allergic and non allergic individuals. Journal Allergy 15:77 1944.
6. Best and Taylor: Physiological Basis of Medical Practice, Williams & Wilkins, 1940.
7. Duke-Elder: Text Book of Ophthalmology, Vol. 1, pp 541-545. C. V. Mosby Co., 1938.

UNSATISFIED DEMAND FOR STREPTOMYCIN

Perhaps the greatest unsatisfied popular demand for streptomycin is for pulmonary tuberculosis. The profession can do much to allay anxiety and even indignation about non-availability of the drug for the average patient by acquainting the public with the fact that for the great majority it would be of little benefit.

Recent reports from the U. S. A., such as Muschenheim's, confirm earlier findings that chronic lesions with fibrosis and cavitation respond comparatively poorly, though chemotherapy may help by making thoracoplasty practicable when previously it was not. Apart from cases of miliary tuberculosis, streptomycin is chiefly indicated for early acute exudative lesions; laryngeal and tracheobronchial ulceration also respond favourably.—British Medical Journal.

POLYCYTHEMIA VERA (ERYTHREMIA) WITH CORONARY OCCLUSION AND MYOCARDIAL INFARCTION: REPORT OF A CASE TREATED WITH ANTICOAGULANTS*

By
JOHN S. PEARSON, M. D., Huntington, West Virginia
and
JEAN F. NOERTKER, B. A., Cincinnati, Ohio

Since the classical description of polycythemia vera by Osler in 1903,[1] little has been added to the literature concerning this interesting disease excepting discussions of its complications. Myocardial infarction in a case of polycythemia vera and its unique treatment with anticoagulants prompted this review.

Osler[1] described 2 cases of polycythemia vera of his own and reviewed 6 others which he had personally seen. He called attention to the frequency of arterial hypertension and arteriosclerosis, but did not mention arterial occlusion as a complication.

The first published case of what was thought to be polycythemia with a "cardiac thrombosis" was that of Umney[2] in 1909. His case had thromboses in all 4 extremities and death was thought to be due to "thrombosis of the right ventricle." No postmortem examination was made. Lange[3] reported a single case which showed "myocardial changes" as well as cerebral "softening due to thrombosis." Arnstein[4] reported 1 case with myocardial degeneration found at autopsy. Christian[5] reviewed 10 cases, in one of which autopsy revealed multiple thromboses and myocardial infarction. Weber[6], in his monograph on polycythemia, reviewed 29 cases with autopsy. Ten of these cases showed various thromboses. However, only three had cardiac findings; two showed "myocardial fibrosis" and one showed "nodular thickening of the coronary arteries." Brown and Giffin[7] studied 14 cases, 5 of which showed arteriosclerotic vascular changes, but these authors stated that "cardiac enlargement and cardiac disease" were noticeably absent. Harrop[8] wrote a detailed review of polycythemia in 1928, but did not mention coronary occlusion and myocardial infarction. Oppenheimer[9] reported 7 cases of polycythemia vera with vasuclar thromboses, one of which had acute coronary occlusion. This case was a 38 year old male who had been known to have polycythemia for eleven years. Although the diagnosis was not proven by autopsy, the clinical evidence of myocardial infarction based on a transient friction rub, fever, leukocytosis and serial electrocardiographic changes was convincing. In a review of 100 cases of polycythemia vera at the Mayo Clinic, Brown and Giffin[10] stressed the incidence of vascular complications in this disease, but did not mention coronary occlusion or myocardial infarction. Boyd[11] reported one case with evidence at autopsy of thrombosed left coronary artery and apical infarction. This patient was a 37 year old male with very slight arteriosclerotic changes. Weber[12] published the account of one case showing a large mural thrombus in the left ventricle with an underlying subendocardial infarct. Normal and Allen[13] reviewed 98 cases, of which 33 had vascular complications. Of these cases 5 had disease of the coronary arteries, 2 showing coronary thrombosis and myocardial infarction and 3 showing arteriosclerosis. Sohval[14] studied 60 cases of polycythemia vera, 7 of which were autopsied; one showed an old thrombus in the left coronary artery with a healed myocardial infarct; 4 others were said to have had "coronary disease." Miller[15] reported 5 cases of myocardial infarction with polycythemia vera, only 3 of which had coronary occlusion. He stated that the incidence of concurrent polycythemia vera and coronary thrombosis is more frequent than is generally recognized, and that this complication must be considered as a part of the disease. Zeiter[16] reviewed 31 cases, 9 of which had vascular disturbances, but coronary artery disease was not mentioned. Fitz and others[17] reported a single case with autopsy which showed 2 small healed myocardial infarcts associated with marked coronary arteriosclerosis. This patient had had frequent attacks of angina pectoris during life. Tinney and others[18] reviewed 163 cases and found "coronary disease" present in 10 cases (6 per cent). They did not specifically state the number with myocardial infarction, but made the statement that "the incidence of cornorary occlusion in polycythemia vera is higher than it is in the general population." Koral and Bogen[19] found coronary arteriosclerosis in 4 out of 18 cases of polycythemia vera, but reported no coronary occlusions or myocardial infarctions.

Material.—We have reviewed the charts of 5 cases of polycythemia vera with vascular complications which were seen at the Cincinnati General Hospital between January 1, 1924 and December 31, 1947. The diagnosis were made in accordance with the criteria usually enumerated for this disease[20, 21]. Case 1 had multiple thromboses in the lungs and brain. Case 2 had a cerebral thrombosis and had suffered from angina pectoris during life. Case 3 had ateriosclerotic gangrene of the left foot requiring amputation.

*From the Cardiac Laboratory of the Department of Internal Medicine, University of Cincinnati College of Medicine, and the Cincinnati General Hospital. (This study was made possible by a grant in aid from the Life Insurance Medical Research Fund.)

Case 4 had gangrenous toes of the left foot. Case 5 is to be reported in detail. Thirteen cases of secondary polycythemia were seen during the same period of time. Only 3 of these exhibited vascular complications; 2 were cases of cerebral thrombosis, and one had acute coronary occlusion with myocardial infarction. This last case had arteriosclerotic and hypertensive heart disease with chronic congestive failure.

CASE REPORT

Mrs. M. W., a 52 year old white female, was first admitted to the Cincinnati General Hospital July 7, 1945, at which time her complaints were "nervousness and weakness." She stated that after a "nervous breakdown" in 1935 her family doctor had discovered that she had "too many red corpuscles." For this he administered a series of 5 "injections" without noticeable subjective improvement. In 1943 she had an episode consisting of nausea, vomiting, headache, and fainting. Following this she had a "mild" right facial paralysis. Her doctor told her she had had a "stroke" and he kept her in bed for four months. Since that time she had noticed almost constant fatigue. About one year prior to this admission she went to another doctor who confirmed the diagnosis of "too many red corpuscles." His therapy consisted of venesections about every other week, removing 275 cc. of blood at each phlebotomy.

On admission the physical examination revealed the following postitive findings: (1) snow-white hair; (2) "reddish-purple" discoloration of the skin of the face and nailbeds; (3) a small nodule in the left lobe of the thyroid gland; (4) an enlarged spleen which extended 3 fingerbreadths below the left costal margin. The heart was normal in size and no murmurs were heard. There was no clubbing of the fingers and the neurological examination was without significant abnormality.

Laboratory procedure revealed a red blood count of 9,170,000; hemoglobin was 15.5 Gm.; 19.1; MCV 60.4; MCHC 31.6; hematocrit 52%. The urine showed a trace of albumin and an occasional hyaline cast. The venous pressure was 6.5 cm. H_2O. The circulation time was 20 seconds using Decholin. The vital capacity was 2.2 L.

A diagnosis of polycythemia vera was made. A venesection with removal of 500 cc. of blood was performed and the patient was discharged after ten days' observation. She was followed in the Medical Outpatient Clinic from discharge until the latter part of 1946. During this time the hemoglobin ranged between 13 and 18 Gm. and the red blood cell count ranged between 6.8 and 9.8 million. Venesections of 500 cc. of blood were performed once monthly. The blood pressure was recorded as 145/85 on several occasions.

She was readmitted November 2, 1947, with the chief complaint of "pain over my heart" of approximately twelve hours' duration. She stated that she had had almost daily attacks of similar pain but that each attack lasted only a few minutes.

Physical examination revealed a dyspneic, white-haired female with evident precordial distress. There was a ruddy cyanosis of the face, the blood pressure was 190/130, the spleen was palpable about 3 fingerbreadths below the left costal margin.

The red blood cell count was 11.0 million with 24 Gm. hemoglobin. The white blood cell count was 16,350. MCV 64.5; MCH 21.8; MCHC 33.8%. The prothrombin time was 14.9 seconds (control 14 seconds). An electrocardiogram showed changes consistent with acute anterior myocardial infarction. Blood pressure on November 4 was 120/70.

Treatment consisted of 500 cc. phlebotomies every other day until the red blood cell count was reduced to 6.6 million. She was started on heparin-dicumarol therapy beginning with 300 mg. dicumarol by mouth and 300 mg. heparin by continuous intravenous drip at a rate to maintain the capillary clotting time between 12 and 15 minutes. On November 6 the prothrombin time had been raised to 22 seconds (a prothrombin concentration of 29%) so the heparin was discontinued. The prothrombin concentration was maintained between 10 and 35% by an average daily dose of 50 mg. of dicumarol. Serial electrocardiograms showed progressive changes from acute to healing infarction. After a stormy course for two weeks she proceeded to recover and was discharged December 22, 1947, still on a maintenance dose of 50 mg. of dicumarol daily. She was followed as an outpatient with prothrombin concentration determinations being made twice weekly. It was found that while ambulatory she required only 50 mg. of dicumarol every other day to maintain a prothrombin concentration between 25 and 35%.

On December 31, 1947, pulsus bigemminus was noted. An electrocardiogram showed (1) every alternate beat to be of ventricular origin and (2) evidence of the old anterior myocardial infarction. The blood pressure was 148/98. She was readmitted for quinidine therapy (3 grain doses every 4 hours) which controlled the cardiac

arrhythmia in twenty-four hours. Dicumarol in 50 mg. doses every other day was continued.

The patient had a daily complaint of weakness and occasional angina pectoris. On January 10, 1948 she complained of severe precordial pain and became pale and pulseless with cold clammy skin and unobtainable blood pressure.

Electrocardiogram showed changes consistent with acute posterior myocardial infarction. The white blood count was 15,000 and the sedimentation rate was 22mm/1 hr. She was given plasma and cardiac stimulants in an effort to combat the shock, without success. She died about five hours after onset of the acute attack. The prothrombin concentration on the third day before death was 34%. In view of her critical state a determination of the prothrombin concentration was not made on the day of death.

A post mortem examination was not permitted.

DISCUSSION

Two manifestations of the disease, intravascular thrombosis and hemorrhage, are stressed by many authors. Harrop[8] believed that both may be seen in the same patient at different times. Brown and Giffin[10] believed that the tendency to thrombosis was due to a number of factors: increase in the circulating blood volume with high viscosity, sluggish circulation (increased circulation time), hypercalcemia and increase in the number of platelets. Blumgart and others [23] have demonstrated the marked slowing of the circulation in polycythemia. Brown and Roth[22] described hypercalcemia which they too considered a contributing factor in the tendency to thrombosis. Miller[15] believed that the hyperplasia of all blood elements with the attending sluggishness of blood flow and consequent anoxemia was responsible. In view of these factors which ordinarily lead to thrombosis it is difficult to explain the cause of complicating hemorrhage. However, Norman and Allen[13] believed that it was due to the greatly increased distention of the vascular bed and the subsequent rupture of the vessels.

All authors discussing the vascular complications of polycythemia vera have mentioned the relationship to arteriosclerosis. Many of the cases reported are within the older age groups and arteriosclerosis cannot be ruled out as the cause of the intravascular clotting. However, in certain cases, particularly in those of Boyd,[11] Oppenheimer[9] and Miller,[15] the individuals concerned were in the age group in which arteriosclerosis is normally not encountered. Apropos of this discussion, Oppenheimer[9] believed that the excessive wear and tear by a fluid of increased viscosity may facilitate the formation of premature arteriosclerosis.

Recently, a number of investigators have used and recommended the anticoagulants in the treatment of myocardial infarction [24-31]. A few reports on the ambulatory use of dicumarol have appeared [27, 32, 33] in the hope of preventing subsequent thrombosis. With the known tendency toward the development of intravascular clotting in cases of polycythemia vera and of patients with coronary occlusion and myocardial infarction to have repeated attacks, we felt that a patient suffering with the two diseases concurrently would be the ideal subject for such therapy. Experience gained in the treatment of 40 cases of myocardial infarction with heparin and dicumarol[28] was utilized in planning the therapy in this case. The case of secondary polycythemia with coronary occlusion and myocardial infraction mentioned under *Material* was one of the 40 cases.

Following her discharge from the hospital after the first admission the patient was continued on ambulatory anticoagulant therapy. Because of the reported hemorrhagic tendency in polycythemia vera cases such therapy is not without danger. Bi-weekly prothrombin concentration determinations were carried out, and the attempt successfully made to maintain the concentration of prothrombin between 25 and 30 per cent of normal. The patient carried with her at all times a card much like that advocated for persons with diabetes, indicating the diagnosis and therapy, with a statement of the recommended treatment in case of bleeding (vitamin K and blood transfusion). It was planned to control the polycythemia by blood letting as the red cell count dictated, keeping the red blood count between 4 and 4.5 million per ccm.

Those authors [27, 32, 33] who reported on the ambulatory anticoagulant therapy indicated no failure in preventing future thromboses in their cases, some of which were continued on dicumarol for as long as four years. We could find no report of a patient with polycythemia vera receiving anticoagulants, but had no reasons to believe that such a case would show any but a favorable result from this therapy. The fact that she was not protected from subsequent thrombosis invites speculation on the mechanism of blood coagulation in polycythemia vera. We believe that the prothrombin concentration levels maintained were adequate. In spite of this, she apparently had a second episode of myocardial infarction. Though not proved by autopsy the evidence presented, i.e., percordial pain, fever,

leukocytosis, shock, collapse and EKG changes, seemed conclusive.

SUMMARY AND CONCLUSIONS

A case of polycythemia vera (erythremia) complicated by two episodes of acute myocardial infarction is reported.

Literature concerning polycythemia vera and vascular disease has been reviewed. This review failed, however, to substantiate the claim of others that myocardial infarction is a common complication of polycythemia vera.

It is believed that ours is the first reported case of polycythemia vera and myocardial infarction treated with anticoagulants. Further, it is believed to be the first case of myocardial infarction carried on ambulatory anticoagulant therapy that was not protected from a subsequent myocardial infarction while an adequate level of prothrombin activity was maintained.

BIBLIOGRAPHY

1. Osler, W.: Chronic Cyanosis with Polycythemia and Enlarged Spleen: A New Clinical Entity, Am. J. Med. Sc. 126: 187, 1903.
2. Umney, W. F.: Polycythemia Rubra or Erythremia and Chorea, Lancet 1: 1243, 1909.
3. Lange, F.: Hemiplegia in an Old Woman with Erythremia; Necropsy, Med. Klinik. 6: 900, 1910.
4. Arnstein, A.: Polycythemia Rubra, without Splenomegaly, Gesellschaft f. inn. Med. u. Kinderheilk. 25: 1137, 1912.
5. Christian, H. A.: Nervous Symptoms of Polycythemia Vera, Am. J. Med. Sc. 154: 547, 1917.
6. Weber, F. P.: Polycythemia, Erythrocytes and Erythraemia (Vaquez-Osler Disease), New York, Paul B. Hoeber, Inc., 1922.
7. Brown, G. E., & Giffin, H. Z.: Studies of the Vascular Changes in Cases of Polycythemia Vera, Am. J. Med. Sc. 171: 157, 1926.
8. Harrop, G. A., Jr.: Polycythemia, Medicine 7: 291, 1928.
9. Oppenheimer, B. S.: Vascular Occlusion in Polycythemia Vera, Tr. Assoc. Am. Phys. 44: 338, 1929.
10. Brown, G. E. & Giffin, H. Z.: Peripheral Arterial Disease in Polycythemia Vera, Arch. Int. Med. 46: 705, 1930.
11. Boyd, W.: Polycythemia, Duodenal Ulcer and Coronary Thrombosis, Tr. Assoc. Am. Phys. 48: 209, 1933.
12. Weber, F. P.: Erythremia with Migraine, Gout and Intracadiac Thrombosis, Lanct 2: 808, 1934.
13. Norman, I. L., & Allen, E. V.: The Vascular Complications of Polycythemia, Am. Heart J. 13: 257, 1937.
14. Sohval, A. R.: Hepatic Complications in Polycythemia Vera, Arch. Int. Med. 62: 925, 1938.
15. Miller, H. R.: The Occurrence of Coronary Artery Thrombosis in Polycythemia Vera, Am. J. Med. Sc. 198: 323, 1939.
16. Zeiter, W. J.: Peripheral Vascular Disturbances in Polycythemia, Med. Clinics North Amer. 24: 485, 1940.
17. Fitz, R., Walker, B. S., & Branch, C. F.: Polycythemia Vera, Arch. Int. Med. 70: 919, 1942.
18. Tinney, W. S., Hall, B. E., & Giffin, H. Z.: Cardiac Disease and Hypertension in Polycythemia Vera, Proc. Staff Meet. Mayo Clin. 18: 94, 1943.
19. Koral, E. & Bogen, E. F.: Polycythemia: A Study of 18 Cases, Med. Bull. Vet. Adm. 21: 188, 1944.
20. Wintrobe, M. D.: Clinical Hematology, ed. 2, Phila., Lea & Febiger, 1946. p. 588.
21. Minot, G. R.: Erythremia, in Cecil's Textbook of Medicine, ed. 7, Philadelphia, W. B. Saunders Co.
22. Brown, G. E., & Roth, G. M.: The Reduction of Hypercalcemia in Cases of Polycythemia Vera by Phenylhydrazine, J. Clin. Investigation 6: 159, 1928.
23. Blumgart, H. L., Gargill, S. L., & Gilligan, D. R.: Studies on the Velocity of Blood Flow: XV. The Velocity of Blood Flow and Other Aspects of the Circulation in Patients With "Primary" and Secondary Anemias, and in Two Patients With Polycythemia, Vera J. Clin. Investigation 9: 679, 1931.
24. Peters, H. R., Guyther, J. R., & Brambel, C. E.: Dicumarol in Acute Coronary Thrombosis, J. A. M. A. 130: 398, 1946.
25. Parker, R. L., & Barker, N. W.: Use of Anticoagulants in the Management of Acute Myocardial Infarction, Preliminary Report, Proc. Staff Meet. Mayo Clin, 22: 185, 1947.
26. Falk, O. P. J.: Treatment of Coronary Artery Disease: Dicumarol Therapy, J. A. M. A. 134: 491, 1947.
27. Wright, I. S.: Evaluation of Anticoagulant Therapy in Cardiovascular Disease, Philadelphia, Tr. & Stud., Coll. Physicians, 15: 15, 1947.
28. Glueck, H. I., Strauss, V., Pearson, J. S., & McGuire, J.: Combined Heparin-Dicumarol Therapy of Myocardial Infarction: A Clinical & Pathological Study, Am. Heart J. 35: 269, 1948.
29. Nichol, E. S., & Page, S. W.: Dicumarol Therapy in Acute Coronary Thrombosis, J. Florida M. A. 32: 365, 1946.
30. Wright, I. S.: Experiecnes with Dicumarol in the Treatment of Coronary Thrombosis with Myocardial Infarction, Am. Heart J. 32: 20, 1946.
31. Nichol, E. S.: Treatment of Acute Coronary Thrombosis With Dicumarol, Further Observations, Am. Heart J. 33: 722, 1947.
32. Nichol, E. S., & Fassett, D. W.: An Attempt to Forestall Acute Coronary Thrombosis, Preliminary Note on the Continuous Use of Dicumarol, Southern M. J. 40: 631, 1947.
33. Brambel, C. E.: Personal communication.

THE MIGHTY GENE

The physician, knowing the family traits, can look for them and aid in the diagnosis and prognosis of many of the patient's complaints. Best of all a knowledge of hereditary diseases may allow the physician to prevent certain conditions. Members of diabetic families may prevent or postpone the manifestation of the disease by not allowing themselves to become obese and by remaining on a modified low carbohydrate diet. Diabetes is seven times as frequent in the obese. The hereditary diseases dependent upon disturbed lipoid metabolism may be prevented or modified by diet.

Genetic prognosis includes favorable characters as well as diseases. Physical beauty, artistic ability, musical talent and intelligence are transmitted from parents to their offspring.

As the science of medicine becomes broader it embraces not only the diagnosis and treatment of disease but the prevention of disease and the maintenance of health. The eugenists look even further forward to a time when the knowledge of heredity will permit great eugenic programs directed towards the improvement of the human race.—Illinois Medical Journal.

GERIATRIC REHABILITATION

The aim of geriatric rehabilitation is to restore the maximum degree of painless movement by means of active physiotherapy and remedial exercises, resulting in the maximum or personal independence; we can no longer be satisfied with merely removing pain. If the patient reaches a stage of weight-bearing, assisted or unassisted, so much the better. Utilizing simple physiotherapy for a sufficiently long period the proportion of patients who are bedfast can be dramatically reduced.

No longer do we label our patients irremediable, incurable, chronic, or senile; instead we make a prognosis based both on diagnosis and on an assessment of the particular person's physical capacities. We recognize that deterioration inevitably accompanies certain irremediable disease, and that a time must come when the patient will have to remain in bed throughout the 24 hours; but it is surprising how long this point can be postponed. Many patients with advanced malignant disease are happier and complain less of pain when encouraged to get out of bed for a part of each day to help themselves.

With few exceptions, in which I include the final inevitable deterioration, the inability of a permanently bedfast patient to feed and generally look after himself is to be regarded as a medical reproach.—L. C. Cosin in The Lancet.

PHYSICAL MEDICINE IN ORTHOPEDIC SURGERY

In general, the orthopedic surgeon has long recognized the value of physical therapy measures in the physically handicapped.

The literal translation of the name of this specialty, "to make the child straight," does not adequately define the field of orthopedic surgery, since the removal or prevention of deformity is only a preliminary step in improving function. It must be remembered that the physiology of deformity is an important factor in loss of function and that when a deformity has been corrected one has still a job to do in improving the function of the corrected past so that the patient will receive the utmost benefit.

In the case of joints a good rule to observe is that, given a poor joint plus poor muscles which control that joint, the joint represents a real disability and will continue to do so unless something is done about it. It may be necessary to accept poor joint structure, but it is not necessary to accept poor muscle function, provided the innervation or a disease has not destroyed the controlling muscles. Physical therapy measures, used with judgment, will help to bring these muscles back to normal, and once this has been done a liability has been turned into an asset.—Frank R. Ober, M. D., in Archives of Physical medicine.

EFFICIENCY OF MEDICAL SERVICE

Family doctors have ample opportunity these days to see themselves as others see them. From such an emotional outlook as that of Ian MacLaren it was a heart-warming view, and many a patient continues to share it with those who knew the horse-and-buggy doctors at their best. In many of the mirrors held up to the physician of today, however, there is an emotional screen that removes all trace of sentiment and feeling.

The industrial or business point of view is one where efficiency sits enthroned, and where lack of efficiency is viewed with impatience. Doctors, in their daily lives, are inclined to place a higher value on the end result than they do upon the efficiency with which it is achieved. In matters seriously involving life and limb this attitude is understood and is even encouraged by thoughtless people when they tell the doctor that he is to "spare no expense" in this and that, believing that the more the service costs the better it must be. People believe this because they may have no better method of appraisal.

Modern industry wants the best results too; it not only is beginning to demand them but also is aware of the fact that the efficiency with which they are achieved is a measure of their value, and to some extent of their quality as well. Although industry still employs largely the private doctor, and upon his own terms too, his methods as well as his results are being scrutinized by businessmen, by labor leaders, by engineers and by other physicians all of whom are geared to modern industry's heartless demand for efficiency as well as for good results.—New England Journal of Medicine.

DOCTORS AND DIVERSIONS

Doctors frequently advise their patients to relax and take things easy, but seldom seem to find the time or opportunity to follow their own good advice. As a result, their life expectancy falls far short of the biblical allotment of "three score years and ten." We are an anxious, care-worn and fretted profession, and many of us worry about episodes in the past that can not be altered, and about happenings in the future that may never occur.

There are several things that can be done about this. Sir William Osler said, "if the load of tomorrow be added to that of yesterday and carried today, it will make the strongest falter." There is one way to avoid such an error, and that is to live one day at a time. The greatest worrier I have ever known is one who possesses every comfort and luxury that money can buy, yet lives in an ever-present atmosphere of depression and gloom.

Travel is an excellent form of diversion, but not the way that many medical men indulge in it. They rush to a convention in a distant city, read a paper, engage in a lively debate and raise their blood pressure 40 or 50 points. If they are prominent and successful men, they repeat this deadly dose two or three times every year. This procedure does not tend to prolong life. Doctors need diversions, hobbies and frequent short vacations.—C. F. P. in Bull. Med. Soc. County of Kings (N. Y.).

INFECTIOUSNESS OF CANCER

There is no evidence that cancer is a germ disease, such as pneumonia or tuberculosis. Cancer is not contagious. Of the recorded cases, we do not find a report of a person, who has been in close contact with a cancer patient, of ever having acquired cancer from that cancer patient.—Herman L. Kretschmer, M. D., in Illinois Medical Journal.

The President's Page

"Oh! wad some power the giftie gie us
To see oursels as ithers see us . . ."

This well known quotation from Robert Burns should be the theme song of our whole public relations program. To evaluate ourselves may be somewhat difficult, but it is necessary that it be done in order to have a successful campaign.

There was no question of public relations during the time that the family physician was supreme. He was not only the physician; he was the friend and counselor of all the community and guided its destiny through all the problems of birth, marriage, and death.

Today, we may have lost much of that invaluable public interest that we have had in the past. Many of us seem to have failed to realize that the practice of medicine is an art as well as a science.

The science of the practice of medicine has made rapid progress so that today we are the healthiest nation that has ever been known, but at the same time it has made of us a machine of the atomic age.

The art of the practice of medicine has not kept pace with science. It is something more difficult to evaluate, yet it is essential to good public relations. It cannot be measured by grades or the I. Q. test. It cannot be taught to students by teachers, especially those full-time men who have no contact with the public. It is the inherent desire of a physician to serve his fellowman.

There are too many of us today who have no knowledge of the principles and practice of ethics; too many of our graduates today continue on into the specialties without having had the invaluable experience of general practice; and, too many of us enter the practice of medicine only because of the pecuniary gains.

These are a few of the many problems that are necessary for us to solve in order to have a successful public relations campaign.

It is necessary for us to rededicate ourselves to the altruistic principles of the Hippocratic oath and to evaluate ourselves in the light of public opinion. It can be done.

Thomas G. Reed.
President.

West Virginia Medical Journal

Official Journal of
The West Virginia State Medical Association
302 Atlas Building, Charleston, West Virginia

Editor
Walter E. Vest, M. D. (1951) ..... Huntington

Managing Editor
Mr. Charles Lively ..... Charleston

Associate Editors
W. M. Sheppe, M. D. (1949) ..... Wheeling
Edward J. Van Liere, M. D. (1950) ..... Morgantown
G. G. Irwin, M. D. (1952) ..... Charleston
R. H. Edwards, M. D. (1953) ..... Welch

Editor Emeritus
James R. Bloss, M. D. ..... Huntington

Business Manager
Mr. Charles Lively ..... Charleston

Published monthly on the first day of the month, at Charleston, by The West Virginia State Medical Association.

Original articles are accepted on condition that they are contributed exclusively to the Journal.

Advertising rates furnished upon request. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the American Medical Association.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston 24, West Virginia. Telephone, Capitol 34-625.

THE FOUR-YEAR SCHOOL

When a controversy over location threatened defeat of consideration of the bill creating a four-year school of medicine and dentistry, the Council of the West Virginia State Medical Association very promptly withdrew its suggestion that the school be built at Charleston, and asked the Legislature to amend the bill, on second reading in the House, to provide that the school should be built at "such place as may be designated by the Legislature."

This action on the part of the Council, designed to unify forces seeking the establishment of the school, was a demonstration of the feeling of the members that the building of the school is the prime consideration, and that location is of secondary importance.

The reasons why the Council originally suggested Charleston have been told many times over in The Journal and the state press. However, where the school should be built is a matter that must eventually be determined by the Legislature. The important thing is to get it built.

We do not question the motives of any individual or group in opposing the creation of the school. There is always room in a democracy for a difference of opinion. This is as it should be.

Opposition seems to be based principally on the admitted fact that maintenance cost would be heavy. This, however, should be weighed with the apparent necessity for providing for doctors and dentists to meet a critical shortage in this state. Again, the very fact that over 800 students are taking pre-medical, and 250 pre-dental work at the University and colleges in West Virginia should be given some consideration. We have the material here at home, but we are not "following up" by offering any dental education, and but half a medical education for our students.

We are confident that doctors and dentists overwhelmingly desire that this school be built, and we believe that the great majority of our people favor the program. As this editorial is being written (February 19), the bill is being held on second reading in the House of Delegates. Some action is indicated within the next two or three days, and we still believe that the Legislature will not definitely rule out consideration of a proper solution for the medical and dental needs of the people of West Virginia.

HARRISON COUNTY BULLETIN

Our congratulations to the Harrison County Medical Society for sponsoring one of the best local society bulletins we have ever seen. It compares most favorably with the regular monthly bulletins issued by some of the largest medical societies in the United States.

The news items are presented in a readable manner, and the information printed in the two-page bulletin is undoubtedly of interest to every member of the Society.

We hope that copies of the bulletin will be mailed to all of the societies in the state, as the example set by Harrison is worthy of careful study by every medical group which meets regularly throughout the year.

MRS. GEORGE F. LULL

Mrs. George F. Lull, wife of the secretary and general manager of the American Medical Association, died suddenly in Chicago, February 5, 1949. She was believed to be recovering satisfactorily from phlebitis, but suffered a pulmonary embolism, which resulted fatally within a few minutes. On behalf of the members of the West Virginia State Medical Association, we extend deepest sympathy to Doctor Lull in his bereavement.

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

OFF THE TRACK

The future of West Virginia's medical and dental school is in danger of being decided on the basis of secondary considerations. One of them is the squabble over a site. Another is the fear of the university's authorities that the state will construct a school and then fail to support it with sufficient funds to guarantee a firstclass institution; or, worse than that, rob the existing schools of law, engineering, agriculture and mining to pay for the new departure in education.

Neither of these considerations is unimportant, but it would be a great pity if the Legislature were to make up its mind on the basis of either alone. It is for this reason that the West Virginia Medical Association has withdrawn its recommendation of Charleston as a site for the school. This will not end the rivalry among the state's cities, but it should free the Legislature in its search for the best one. It is with the same general objective that the University board of governors has submitted a revised statement of its views to Governor Patteson. It would like to have a school of medicine and dentistry. If one is established, the board of governors would prefer to see it established at Morgantown, where the physical unity of the university can be preserved. But most of all it wants the assurance that the new school will not be established at the expense of existing departments and schools.

Both of these questions resolve themselves into questions of opinion. There is no final authority to say which location would be the best, the opinion of the medical association, in this connection, being about as expert as the Legislature can expect. Nor is there anyone in the Legislature or the administration who can say with authority that the state, having established a medical school, will always be able to support it as well as it may deserve.

It would be useless, therefore, to insist that the Legislature find an answer where only judgments are available. It is not unrealistic, however, to insist that it confine itself to the main issue. The state suffers from a lack of doctors and dentists. It has hundreds of young men and women who are anxious for the training to make up that deficit. The state can no longer count on schools in nearby states to do the job. This leaves for the legislature the problem of determining as best it can what is the state's need and what it can do about it. It is not an easy job, but it is none the easier for getting side-tracked into secondary issues.—Charleston Daily Mail.

DOCTORS UNDER BUREAUCRATS

According to an AP dispatch from London, "Britain's national health service—the world's biggest experiment in socialized medicine—is undergoing a strain." That strain, in the view of Health Minister Bevan, results from the fact that "too many are demanding too much." In other words, people are working on the theory that they may as well visit the doctor whether they are sick or not, because "free" medical service is coming to them. This situation has reached so extreme a point that Mr. Bevan issued a public statement in which he said: "Don't let us become a nation of hypochondriacs. I ask the public to use their doctors wisely and only when they really need them."

It is also evident that the cost of providing allegedly "free" health service for all is approaching a critical point. The government's original forecast was that the bill would run to 150,000,000 pounds a year. But the actual cost, according to the British Medical Association, will exceed 250,000,000 pounds.

The most important thing, of course, is just what Britain's socialistic experiment is doing to the standards of medical care. And here, too, some significant and authoritative information is available. Lord Horder, a physician in ordinary to the royal family, has this to say: "Medicine in Britain has become a branch of the civil service. We are no longer medical experts; we sit and sign forms. We have no time to diagnose our patients' diseases; but pass them on to other persons and institutions, knowing full well that they cannot dispense the health benefits which may or may not be needed."

So there is the latest example of socialized medicine—overworked doctors, soaring costs, poorer treatment, and bureaucracy rampant. Shall the United States follow that sorry example? There are definite statements that an all-out effort will be made to force Congress to take this step along the socialization route.—Wheeling News-Register.

ALCOHOLISM COMPARABLE TO TUMORS

In spite of all our vaunted knowledge, in spite of recent conferences sponsored by industrial and medical groups, and in spite of the personal experience of every individual who has had an alcoholic in his family, or perhaps was an alcoholic himself, or who knows an alcoholic who was "cured," we shall accomplish little unless we keep very firmly in mind the fact that this psycho-sociobiological illness is comparable visually to tumors, including cancer.—Robt. B. Seliger, M. D., in J. So. Med. & Surg.

GENERAL NEWS

COUNCIL ACTS TO UNIFY SUPPORT FOR WHOLE LEGISLATIVE PROGRAM

The creation of the four-year school of medicine and dentistry of West Virginia University, and the construction of a "University Hospital" in connection therewith, was discussed at length by members of the Council and Legislative Committee at a joint meeting held February 16, at the Press Club, in Charleston.

Due to the fact that considerable controversy had arisen concerning the location of the school, the Council, for the expressed purpose of solidifying the support evident over the state for the creation of the school, voted unanimously to withdraw its recommendation that such school be located at Charleston. It was ordered that the Legislature be asked to amend the bills by deleting therefrom all mention of Charleston and providing that the school is to be located at such place as the Legislature may designate.

Council Restates Position

It was further ordered that the following restatement of the position of the Council be incorporated in identical letters to be addressed by the Executive Secretary to Governor Okey L. Patteson, Senate President W. Broughton Johnston, and House Speaker William E. Flannery:

"The need for doctors and dentists in West Virginia is critical and we still believe that this condition can be alleviated to a great extent by providing a complete medical and dental education in this state for our students.

"We have spent several months trying to arouse our people to the need for creating a four-year school of medicine and dentistry. This campaign has been most popular, for there is scarcely an area in West Virginia, with the exception of the large cities, where there is not a doctor and dentist shortage.

"While we suggested Charleston as the location for the school, we realize that the decision on location must be made by the Legislature itself, and we ask that this matter not be deferred for two years, but that positive action be taken at this session. We make this plea on behalf of the thousands of people in this state who are without adequate medical and dental care, due to the doctor and dentist shortage, and on behalf of the hundreds of our students who are denied the right and privilege of completing their education in medicine and dentistry.

"We believe that West Virginia is well able to build and support this school without in the least affecting the normal growth and maintenance of our other state institutions. To delay action now would mean that we could not for many more months begin to remedy a desperate situation which exists in our state."

It was understood that these letters would be drafted and delivered to the addressees at the Capitol on the morning of February 17.

Relief Doctors

The chairman of the Council was directed to appoint two members to confer with a similar committee from the Public Health Council for the purpose of devising a plan for providing for temporary practice by interns and residents in cases where "relief doctors" are needed in any part of the state. It was pointed out by Dr. N. H. Dyer, secretary of the PHC, that the recent ruling of the attorney general holds that such a proceeding would not be a violation of any part of our medical practice act. Subsequently, the following members of the Council were named to confer with a committee from the Public Health Council: Dr. T. Maxfield Barber and Dr. Russel Kessel, both of Charleston.

Exams for Recent "Class B" Graduates

The Council considered the provisions of a bill (S. B. 193) introduced by Dr. Ward Wylie, member of the Senate, permitting the examination and licensing of West Virginia doctors graduating from class B schools during the period from January 1, 1944, to December 31, 1948. It was explained that Chicago Medical School, which was approved as a "Class A" school late in 1948, is the only medical school affected, and that probably but four or five bona fide West Virginia graduates would be affected by the passage of the bill. The Council unanimously approved the bill, and directed the Executive Secretary to notify the sponsor, Doctor Wylie, to this effect.

Honorary Member

Dr. W. H. Cunningham, of Beckley, was elected a lifetime honorary member of the State Medical Association.

Affiliate Fellowship in AMA

Dr. Thomas W. Moore, of Huntington, was nominated for affiliate fellowship in the American Medical Association.

The meeting was attended by Dr. Thomas Bess, chairman of the Council; Dr. Thomas G. Reed, president; Dr. Fred Richmond, first vice president; Dr. J. C. Huffman, second vice president; Dr. T. Maxfield Barber, treasurer; and Drs. L. Rush Lambert, Fred R. Whittlesey, M. H. Porterfield, A. R. Sidell, and Russell Kessell; and Mr. Charles Lively, secretary ex officio. The meeting was also attended by Drs. Frank V. Langfitt, chairman of the Legislative Committee, and W. P. Black, a member, and N. H. Dyer, state health commissioner.

AMERICAN COLLEGE OF ALLERGISTS

The annual meeting of the American College of Allergists will be held April 14-17 at the Palmer House, in Chicago. More than 1,000 doctors are expected to attend the meeting. On Sunday afternoon, April 14, there will be a panel discussion on pediatric allergy under the direction of Dr. Bret Ratner. This discussion will be recorded and published in book form.

All doctors are invited to attend the meeting, and requests for room reservations should be addressed to the Reservation Manager, Palmer House, Chicago 90, Illinois.

PASSAGE PRACTICALLY ASSURED FOR TWO ASSOCIATION-SPONSORED BILLS

The bill providing for creation of a four-year school of medicine and dentistry of West Virginia University is being held over on second reading in the House as this issue of the Journal goes to press (February 19). One of several things can happen: the bill can be advanced to third reading and passage; it can be amended, as suggested by the Council of the State Medical Association, to provide that the school is to be located at some place to be designated by the Legislature, and then advanced to third reading; or, a concurrent resolution, providing for appointment of an interim committee to study the whole question of the establishment of the school, location, and costs of maintenance, can be offered as a substitute measure. There is even a possibility that a special committee might be set up to study the matter and report back at this session. This seems unlikely, however, in view of the controversy over costs and location.

The withdrawal by the Council of its suggestion that the school be located at Charleston more or less united professional groups which have been seeking establishment of the school. This withdrawal means that the Council, which has waged the fight for the school for the past several months, is interested primarily in the establishment of the school. The Legislature is being asked to take some definite action at this session instead of deferring a decision until 1951. The request that the recommendation of the Council that the school be built at Charleston be withdrawn means that the Council believes that the claims of Morgantown, Huntington, Martinsburg, and other West Virginia cities should be heard.

Health Department Bill

Before this issue of the Journal comes off the press, Legislative action will no doubt have been completed on two other bills sponsored by the State Medical Association. Bills providing for the complete reorganization of the state department of health and the creation of a new state board of health, and one creating a new medical licensing board, have been passed by both the Senate and House of Delegates. The bills were passed by the Senate February 18 and returned to the House of Delegates for concurrence in minor amendments.

The reorganization bill provides for the biennial registration of all doctors practicing medicine in West Virginia. The bill would become effective July 1, 1949, and the registration for the next biennium would be begun as of that date. A short form of registration will be mailed to the last known address of every doctor practicing in this state, and it is proposed to give wide publicity to the requirements of the law prior to its effective date. The whole matter of registration will be in the hands of the state health department.

As passed by both houses the bill creates a state board of health which will be composed of three doctors of medicine, one dentist, one osteopathic physician, one hospital representative, one pharmicist, and two representative citizens. They will be appointed by the Governor for staggered terms of nine years each. This board will have complete supervision of the state department of health and its personnel.

Medical Licensing Board

The bill providing for the creation of a medical licensing board would also become effective July 1. The new board would be composed of six doctors of medicine, who will have complete charge of all matters of licensure of doctors in this state. In addition, two chiropractic members and two chiropodists will sit on the examining board when examinations are given for licensure in their respective fields.

MENTAL HYGIENE CONSULTANT

Mrs. Hess Farmer, of Iaeger, has been named mental hygiene consultant for state public schools under the bureau of mental hygiene of the state health department.

Mrs. Farmer will be in charge of a new program which is designed to strengthen the school child emotionally. The course, which is provided primarily for sixth and seventh grade pupils, will be known as "Human Relations in the Classroom." It consists of an intergrated group of lessons which the teacher may either follow closely or modify and adapt as she sees fit.

In stressing the need for the program, the state health department has pointed out that nationwide studies have revealed that out of every 100 children, four will become patients in mental hospitals, eight will develop nervous breakdowns sometime in life, one will become a juvenile delinquent, and two will be born feebleminded or will become feebleminded later in childhood.

As part of the statewide program, Mrs. Farmer will organize the first demonstration course in McDowell county. The new program will be provided for schools only upon the request of the county superintendent of schools.

DOCTOR PICKETT NAMED CIVILIAN CONSULTANT

Dr. Justus C. Pickett, of Morgantown, has been appointed by the Surgeon General of the Army as a civilian consultant in orthopedics, and will leave the middle of March for a visit in Europe.

He will assist in conducting clinics, and will give lectures at various hospitals. The greater part of the work will be done in Germany and Austria, but England and France will be included in the itinerary for the trip, which will be made by air, and will last for several weeks.

The program, which is under the supervision of the Surgeon General of the Army, has been in operation for several months, and may be retained as a permanent part of the medical department's operations.

The consultants are chosen through the efforts of the Society of Medical Consultants of World War II, and each must be certified by the specialty board in his particular field, and preferably have had military service as a medical officer.

STATE LABORATORY DIAGNOSTIC WORK INCREASES 1500 PER CENT IN 20 YEARS

The diagnostic work of the State Hygienic Laboratory has increased 1,500 per cent during the past 20-year period. Approximately 300,000 specimens were processed during the fiscal year 1947-48 as against only 18,000 in 1927-28.

According to Dr. N. H. Dyer, state health commissioner, the greatest single increase in tests has been for syphilis. In 1927-28, approximately 10,000 blood specimens were examined by the laboratory as against 252,000 blood, spinal fluid, and chancre fluid tests in 1947-48, the increase being more than 2,400 per cent.

Besides the steadily increasing number of specimens related to the more common communicable diseases, the State laboratory in recent years has also been making examinations for brucellosis, malaria, tularemia, the rickettsial diseases (Rocky Mountain spotted fever, murine typhus, etc.), and infectious mononucleosis.

Another service is testing water and milk samples. While the increase in this work, 309 per cent for the 20-year period, does not compare with that of the communicable diseases, which increased over 2,000 per

North portico of The Greenbrier, at White Sulphur Springs, where the 82nd annual meeting of the West Virginia State Medical Association will be held August 4-6, 1949.

cent, it has added its load to a more or less static personnel.

In addition to the serological and bacteriological work carried on by the State Hygienic Laboratory, a course of training for technicians was instituted several years ago. During the period from July, 1947, through June, 1948, instruction was given to five senior students from West Virginia University, working for college credit in applied bacteriology, applied parasitology and applied serology, eleven technicians in private laboratories in West Virginia studying syphilis serology, and nine technicians or sanitarians engaged in milk and water bacteriology programs.

POTOMAC CHAPTER, A.C.C.P.

The Potomac Chapter of the American College of Chest Physicians, which includes West Virginia, Maryland and the District of Columbia, will provide the program for the last day (April 27) of the annual meeting of the Medical and Chirurgical Faculty of the State of Maryland, which will be held at the Sheraton Belvedere Hotel, in Baltimore.

The moderator for the symposium will be Dr. W. Leroy Dean, of Washington, and papers will be presented as follows:

Dr. Edward M. Kent, Pittsburg, "Tumors of the Mediastinum"; Dr. Edgar W. Davis, Washington, D. C., "Intrapulmonary Neoplasms"; and Dr. John W. Strieder, Boston, "Tumors of the Thoracic Cage". At the conclusion of the scientific session, the Potomac Chapter will continue its meeting independently at the Sheraton Belvedere. There will be a registration of members, a business meeting, cocktail party, banquet, and X-ray conference.

All West Virginia members of the College of Chest Physicians and Surgeons are invited to attend the sessions at this annual meeting of the Maryland State Society.

AMERICAN ACADEMY OF GENERAL PRACTICE

The first annual Scientific Assembly of the American Academy of General Practice will be held at the Netherland Plaza Hotel in Cincinnati March 7-9.

The scientific sessions of the Assembly have been scheduled for all three days of the meeting. The Program, a broad one, arranged by general practioners for general practitioners, features topics of value to the doctor in general practice. A general invitation has been extended to all members of the American Medical Association to attend the meeting.

Hotel reservations may be made through the Hotel Committee, American Academy of General Practice, 910 Dixie Terminal Building, Cincinnati 2, Ohio.

INTERNATIONAL ACADEMY OF PROCTOLOGY

The International Academy of Proctology has been incorporated in New York State, and charter members, associate fellowships, and fellowships are now open. Full information concerning the organization may be obtained from Dr. Alfred J. Cantor, 4355 Kessina Boulevard, Flushing, New York.

A.M.A. PUBLIC RELATIONS PROGRAM PRESENTED AT MEETING IN CHICAGO

A plan of action for the American Medical Association's nationwide educational campaign was unfolded at the meeting of executive secretaries of state medical associations and chairmen of state public relations committees, held February 12, in Chicago. At this meeting, the members of the firm of Whittaker & Baxter, which has been employed to conduct the campaign for the American Medical Association, were introduced to those who will assist in this important campaign. This California public relations firm will conduct the campaign from Chicago, where offices have been opened at No. 1 North La Salle Street.

Clem Whittaker, the director, submitted the plan adopted by the Board of Trustees, and Miss Leone Baxter, who has been named general manager for the "national education" campaign, told how the AMA assessment of $25.00 per member will be spent.

Mr. Whittaker urged everyone present to get the word to every doctor that this is an emergency and that his help is needed. "We need every doctor taking time out to talk with his patients and his friends about this matter," he said. Another point the speaker made was that the sanctity of the doctor-patient relationship goes out the window when compulsory medicine comes in. "The question is," he said, "whether the people want men of medicine or 'medicine men' in charge of the health of this country."

Both Mr. Whittaker and Miss Baxter made it plain that no paid advertising on radio or in newspapers will be used at this time. The efforts of the firm at the beginning of the campaign will be devoted to preparing and sending to doctors all over the United States literally millions of copies of small pamphlets containing information designed to show the folly of socialized medicine.

The enormity of the undertaking can be gauged by the fact that nearly eight million pamphlets of any one series will be needed in order to place fifty copies in the hands of each doctor.

One of the pamphlets will be "briefed down" to fifty of the most often asked questions. Another single sheet will contain information suitable for doctors to hand to their patients.

A handbook for the use of the doctor himself will be printed and distributed just as soon as possible. The pamphlets for the lay public will be ready for delivery some time during the latter part of March.

"The main object," said Miss Baxter, "will be to get every doctor who believes in the private practice of medicine to get to work actively with his local and state society, and with the American Medical Association." It was pointed out that very little statistical material will be used. The story of the fight against any form of socialized medicine will be told principally in narrative form.

Larry Rember, AMA Director of Public Relations, stressed the importance of every doctor becoming a doctor of public relations, and Dr. Joseph S. Lawrence,

Director of the Washington office, presented an up to the minute report of the outlook in the nation's capitol.

John W. McPherrin, editor, The American Druggist, showed by charts what the druggists over America think of the Truman-Ewing Compulsory Health Insurance program.

The point of view of the executive secretaries of state medical associations was expressed by Charles S. Nelson, Executive Secretary of the Ohio State Medical Association. Mr. Nelson is chairman of the Medical Societies Executive Conference.

In summing up at the conclusion of the meeting, Dr. Elmer L. Henderson, chairman of the AMA Board of Trustees, made it clear that the Board desires that the assessment not be collected from honorary members, nor from any other doctor upon whom the payment might work a hardship.

The AMA program is as follows:

A Federal Department of Health

1. Creation of a Federal Department of Health of Cabinet status with a Secretary who is a Doctor of Medicine, and the coordination and integration of all Federal health activities under this Department, except for the military activities of the medical services of the armed forces.

Medical Research

2. Promotion of medical research through a National Science Foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.

Voluntary Insurance for the Care of the Indigent

3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas. Aid through the states to the indigent and medically indigent by the utilization of voluntary hospital and medical care plans with local administration and local determination of needs.

Medical Care Authority with Consumer Representation

4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.

New Facilities

5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas in which the need can be shown and with local administration and control as provided by the National Hospital Survey and Construction Act or by suitable private agencies.

Public Health

6. Establishment of local public health units and services and incorporation in health centers and local public health units of such services as communicable disease control, vital statistics, environmental sanitation, control of venereal diseases, maternal and child hygiene and public health laboratory services. Remuneration of health officials commensurate with their responsibility.

Mental Hygiene

7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.

Health Education

8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.

Chronic Diseases and the Aged

9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.

Veterans' Medical Care

10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care, including care of the veteran in his own community by a physician of his own choice.

Industrial Medicine

11. Greater emphasis on the program of industrial medicine, with increased safeguards against industrial hazards and prevention of accidents occurring on the highway, home and on the farm.

Medical Education and Personnel

12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

Dr. Frank J. Holroyd, of Princeton, chairman of the State Medical Association's Public Relations Committee, and Mr. Charles Lively, Executive Secretary, attended the meeting as representatives from West Virginia. More than 300 executive secretaries, directors of public relations, and chairmen of state committees attended the one-day meeting at Chicago.

IN MEMORIAM

The following resolution of respect to the memory of the late Harry G. Steele has been adopted by the West Virginia Obstetrical and Gynecoclogical Society:

WHEREAS, Divine Providence has seen fit to remove from our midst our beloved Secretary, and,

WHEREAS, The West Virginia Obstetrical and Gynecological Society owes much of its success to the enthusiasm, unflagging interest, and tireless activity of our confrere:

THEREFORE, BE IT RESOLVED: That the West Virginia Obstetrical and Gynecological Society extends to Mrs. Steele the sincere sympathy of its members in this sad hour of her bereavement; that a copy of this resolution be sent to the wife of our beloved associate; that a copy be sent to the West Virginia Medical Journal with the request that it be published; and that a copy be spread upon the minutes of this Society.

JAMES R. BLOSS, M. D.,
Committee

HANCOCK MEDICAL ELECTS OFFICERS

Dr. J. M. Brand, of Chester, has been elected president of the Hancock Medical Society, and Dr. R. E. Flood, of Weirton, secretary-treasurer.

DEATHS FROM ACCIDENTS IN STATE INCREASE BY 13 PER CENT IN 1948

Provisional statistics for 1948, compiled by the division of vital statistics of the State Department of Health, indicate that the 1948 birth rate may be about seven per cent under the record set in 1947.

In 1948, 52,200 babies were born in West Virginia, with a birth rate of 27.3 per 1,000 population, contrasting with a rate of 29.3 in 1947.

A total of 17,513 deaths were recorded in West Virginia for 1948, which means an excess of 34,687 births over deaths. Expressed in terms of the vital index or birth-death ratio, there were 298 births for every 100 deaths. According to Dr. N. H. Dyer, state health commissioner, the annual vital index of 298 for 1948 is second only to the record high of 315 reported for 1947.

Maternal and Infant Martality

Maternal mortality in 1948 was the lowest on record for West Virginia. Infant mortality showed a slight increase over the low record established in 1947.

Although rates for 1948 are low, just slightly more than one mother per 1,000 live births died as the result of childbirth, and less than 42 babies (under one year of age) died per 1,000 live births. The following comparable rates are significant:

	1930	1940	1948
Infant Mortality	80.9	53.9	41.7
Maternal Mortality	5.7	3.7	1.2

Heart and Cancer

Mortality from heart disease and cancer in West Virginia reached an all-time high in 1948, with death rates of 243.4 and 105.8 per 100,000 population, respectively. Deaths from heart disease and cancer alone accounted for almost one-half of the total deaths in the state. Cerebral hemorrhage accounted for 1,647 deaths, with a rate of 86.2 per 100,000 population.

Communicable Diseases

The report for communicable diseases followed a favorable trend in mortality in 1948. Tuberculosis showed an 8 per cent decrease from the death rate for this disease reported in 1947. Pneumonia and influenza death rates decreased 20 per cent, with 43.5 persons per 100,000 dying from these causes last year.

Other important decreases in communicable diseases include whooping cough, 20 per cent; syphilis, 9 per cent; scarlet fever, 66 per cent; and typhoid fever, 33 per cent. Increases were evident for diphtheria, dysentery, measles and poliomyelitis.

Accidents

In 1948, West Virginia had one of the worst accident records for many years. Deaths from this cause increased 13 per cent over 1947, while the rate for the United States showed a total less than that for the preceding year.

WETZEL ELECTS NEW PRESIDENT

Dr. John O. Theiss, of New Martinsville, has been elected president of the Wetzel County Medical Society to succeed the late Dr. Francis Eugene Martin, of that city.

INDUSTRIAL PHYSICIANS AND SURGEONS

The 34th annual meeting of the American Association of Industrial Physicians and Surgeons will be held at Detroit, April 2-8. Participating groups are: The American Conference of Governmental Industrial Hygienists, American Industrial Hygiene Association, American Association of Industrial Dentists, and American Association of Industrial Nurses.

Headquarters will be established at the Book-Cadillac and the Statler, and a week-long program will be featured by surgical clinics at the Henry Ford Hospital and Harper Hospital.

Dr. Adolph G. Kammer, medical director of Carbide and Carbon Chemicals Corporation, South Charleston, is second vice president of the Association.

PHC LICENSES DOCTORS

At a meeting of the Public Health Council, held Jan. 3-5, in Charleston, fifteen doctors were licensed to practice medicine in West Virginia. The following is a list of those licensed by direct examination:

Richard Orvil Albert, Welch; Bartholomew Cole, Huntington; Robert James Dean, Kimball; Charles William Holcomb, Jacksonville, Florida; Ernest Quentin Hull, Charleston; Louis Amadea Loria, Hepzibah; Richard Young Morgan, Beckley; Edward Anthony Sciano, Wheeling; Harold Sinclair Tait, Weston; and Constantine Veremakis, Wheeling.

The following were licensed by reciprocity:

Robert Lee Bradley, Wood, Wisconsin; Leon Herman, Widen; Maxine Roberta Perdue, Summersville; John James Sherman, Huntington: and John Paul Young, Jr., Wheeling.

DOCTOR VEST HONORED

At the annual meeting of the National Conference on Medical Service, held in Chicago February 6, Dr. Walter E. Vest, of Huntington, was elected a member of the executive committee.

Dr. John S. Bouslog, of Denver, was named president of the Conference, and Dr. R. D. Bernard, of Clarion, Iowa, secretary.

INTERNATIONAL ACADEMY OF PROCTOLOGY

The International Academy of Proctology has been incorporated in New York State, and charter members, associate fellowships, and fellowships are now open. Full information concerning the organization may be obtained from Dr. Alfred J. Cantor, 43-55 Kessina Boulevard, Flushing, New York.

DOCTOR HAMNER RETURNS TO SPENCER

C. E. Hamner, assistant superintendent at the Columbus (Ohio) State Hospital, has been appointed by Governor Okey L. Patteson as superintendent at Spencer State Hospital to succeed Dr. Edward Hawke. Dr. Hawke resigned to accept appointment as senior psychiatrist at Trenton State Hospital, in New Jersey.

Dr. Hamner was formerly superintendent at the Spencer hospital, but resigned several months ago to accept appointment at the Columbus institution.

THE WEST VIRGINIA MEDICAL JOURNAL

302 ATLAS BUILDING, CHARLESTON, W. VA.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Editor
WALTER E. VEST, M. D.
955 Fourth Ave.
Huntington, W. Va.

Managing Editor and
Business Manager
MR. CHARLES LIVELY
Box 1031
Charleston 24, W. Va.

Associate Editors:
EDWARD J. VAN LIERE, M. D.
Morgantown, W. Va.
W. M. SHEPPE, M. D.
Wheeling, W. Va.
G. G. IRWIN, M. D.
Charleston, W. Va.
R. H. EDWARDS, M. D.
Welch, W. Va.

JAMES R. BLOSS, M. D., Editor Emeritus, Huntington

Vol. XLV APRIL, 1949 No. 4

THE EVALUATION OF GLOBIN INSULIN IN THE TREATMENT OF DIABETES MELLITUS*

By

WILLIAM M. SHEPPE, M. D.,
and
WILLIAM M. SHEPPE, JR., M. D.,
Wheeling, West Virginia

The discussion of the characteristics of any form of insulin should begin with the fundamental and brilliant development of regular insulin by Doctors Banting and Best in 1921 and 1922, for this epochal event furnished the foundation on which all subsequent improvements have been based. Hagedorn, in 1935, described the first of the so-called depot insulins, namely, protamine insulin which was later further modified by the addition of zinc. Since that time several other types of insulin with variable time-activity have been introduced. Although such investigation presumably leading to improvement is most desirable, the number of preparations of insulin has grown to such a point that only clincians familiar with the limitations of each can hope to employ any one of them intelligently. It is our personal observation that the profession as a whole is at the moment in a state of considerable confusion in regard to the subject of insulin therapy.

More or less in order of their appearance, five types of insulin have become commercially available for the treatment of diabetes, namely, regular insulin, crystalline insulin, protamine zinc insulin, globin insulin with zinc and mixtures or modifications of protamine zinc insulin. To this group we would like to add another type: globin isulin mixtures. For the sake of completeness, we may list hexamine insulin, surfen insulin, insulin tannate, hemin insulin, histone insulin, di-insulin and subtosan insulin. None of these seem likely to gain a permanent place in the insulin family.

It is important to remember that none of the newer modifications heretofore mentioned differ in any fundamental manner from unmodified insulin. One and all, they merely delay, prolong or reduce the intensity of effect of the basic substance.

MATERIAL AND METHODS OF STUDY

The conclusions to be presented developed after recently reviewing the case records of 386 private patients with diabetes, most of whom are still under observation. Many of these individuals have had from one to five hospital admissions for various reasons but the great majority at any one time are on an ambulant basis. It is our custom to see all patients at periods of one, two, three or four months, depending upon the severity, the cooperation of the patient and the demonstrated response to the therapeutic program. Blood sugar determinations are made routinely at 8:00 a. m., 10:30 a. m. and/or 2:30 p. m. without interruption of the daily schedule of meals and insulin administration.

In the treatment of this group of patients, regular, crystalline, protamine and globin insulin are employed, usually in U-80 concentration given either singly or in various combinations with each other. The initial selection of the insulin prescription for a particular patient depends upon the clinical and laboratory assessment of the requirements of that individual. Factors

*From the Medical Division of the Wheeling Clinic.

which are taken into consideration are age, severity and duration of the diabetes, type of employment (including degree of physical activity) and intelligence of the patient.

In comparing the effect of various insulins, their modifications or combinations, it is customary to state that one or the other produces a more "satisfactory control". The definition of "satisfactory control" is likely to vary widely and this fact probably contributes to the existing disagreement between the proponents of different insulins and injection schedules. In some clinics it is considered sufficient to maintain the patient free of acidosis with glycosuria not exceeding 30 Gm. per day. The opposite extreme demands a sugar-free urine throughout the entire twenty-four hours and a nearly normal blood sugar at all times. Our personal standard of "satisfactory control" requires first, that the patient's blood sugar taken in the fasting state, two and one-half hours after breakfast and two and one-half hours after the noon or evening meals shall not exceed 170 and, second, the production of an insulin effect of fairly even intensity throughout the twenty-four hour period without the production of serious or frequently repeated hypoglycemic reactions. It is understood, of course, that the patient's weight, strength, energy and sense of well-being are maintained at satisfactory levels. This seems to represent a conservative and frequently attainable standard by which to measure the effectiveness of any therapeutic program.

TABLE 1

	Type of Insulin	*No. of Cases*	*Per Cent*
(1)	No insulin	62	16.1
(2)	Regular Insulin	None	
(3)	Crystalline	None	
(4)	NP 50	None	
(5)	Clear (acid) protamine	None	
(6)	Modified protamine zinc insulin	None	
(7)	Histone	None	
(8)	Hemin	None	
(9)	Hexamine	None	
(10)	Surfen	None	
(11)	Insulin tannate	None	
(12)	Di-Insulin	None	
(13)	Subtosan insulin		
(14)	Protamine zinc	58	15.3
(15)	Protamine zinc and crystalline	74	19.2
(16)	Globin	67	17.3
(17)	Globin and crystalline	125	32.1
	Total	386	100.0

Table 1 indicates the number and percentage of patients included in this comparative study who are receiving the various types of insulin and insulin combinations.

The patients listed under line 1 are those with diabetes in a mild form who have never required insulin or have improved under treatment to such an extent that insulin may be at least temporarily discontinued.

No patients are receiving regular or crystalline insulin alone except those temporarily incapacitated by coma, acute infectious disease or the performance of major surgery.

The cases listed under line 14 are those patients who do not require more than 35 units of protamine zinc insulin daily for adequate control.

The 74 patients (line 15) receiving protamine zinc insulin and crystalline insulin as a single injection mixture, together with the 58 patients carried on protamine alone, equal 132 patients, or 24.5 per cent of this group who continue to be treated with this form of slow-acting insulin. The reasons for such continuance are that protamine was proven to be more satisfactory than other insulins in the individual case or that the patient was familiar with and partial to protamine zinc insulin or that the degree of control was so satisfactory that any change was unwarranted.

The cases listed on line 6 are mild in degree and are efficiently controlled by 35 units or less of globin insulin. They are in all respects comparable to those shown on line 14.

The 125 patients receiving globin and crystalline as a one-injection mixture are like those in line 15, inadequately controlled by a single dose of 35 units or more of either protamine zinc insulin or globin. It is obvious, therefore, from this table that we have elected to place 192, or 49.4 per cent, of our patients on globin either alone or in combination with a rapidly acting insulin.

USE OF INSULIN MIXTURES

In the treatment of diabetes most physicians are committed to the frequent usage of mixtures of slow and rapidly acting insulins in the attempted control of the disease in its moderately severe and severe forms. This combination of insulins may be given either separately or as a true mixture. We are especially prone to employ such mixtures as we have enjoyed a singular lack of success in the usage of large single doses of either protamine or globin insulin. The advantages are, of course, that one is able to manipulate the slow and rapid components of the mixture as indicated by results of blood sugar determinations made at different times of the day and thus adjust the dosage to the needs of the individual. The mixtures usually employed vary from 1:1 to 5:1 combinations of crystalline and protamine insulin. Experience has proven that in not more than 50 per cent of patients is the disease adequately controlled by the 2:1

mixture. Such mixtures must necessarily be flexible and this, to my mind, reduces the value of the ready-mixed combinations such as NP 50. It is obviously undesirable to further add to the confusion by trying to market all of the various possible combinations. The vast majority of patients can be taught to measure the extemporaneous mixtures.

It must be recognized that irregularity of meals, infections, pregnancy and surgery readily upset the balance attained with insulin mixtures and the clinician must resort at once to multiple injections of the rapidly acting insulins.

It is fully realized that globin insulin has not received a uniformly favorable acceptance in many clinics. It is necessary, therefore, to attempt to indicate the reasons for its employment in such a large percentage of the diabetic patients in this series. In so doing we should like to exclude consideration of surgical and medical emergencies and those mild cases which are adequately controlled by 35 or less units by any good doctor with any kind of insulin. Neither is pertinent to this discussion. With these eliminations, therefore, we have remaining 199 cases that are classified as moderately severe or severe. For such cases, if multiple injections are to be avoided, the combination of slow and rapidly acting insulins becomes mandatory and protamine insulin has been widely employed in such instances.

Although it is recognized that the development of PZI as the first depot insulin represented a tremendous advance in diabetic therapy, its usage involves certain disadvantages which become apparent in light of the following observations:

1. Protamine insulin is a suspension as contrasted with a solution and so involves the injection of particulate material with the attendant risk of variation of concentration due to inadequate mixing.
2. Local skin and tissue reactions are often very annoying.
3. There is a considerable delay in the production of an insulin effect after injection, a period usually estimated at six to eight hours. Therefore, a satisfactory insulin effect is not obtained during the prandial period of that day, the peak action is delayed and appears during the postprandial period. Obviously, if large doses of protamine are required (above 40 units) frequent hypoglycemic reactions may be expected, especially in the early morning hours. These are usually insidious and always difficult to overcome.
4. Protamine does not lend itself well to the treatment of diabetes in children.

The foregoing statements apply to the standard, turbid protamine insulin with a pH of 7.3. We have had no personal experience with clear protamine zinc insulin having a pH of 3.3. The description of its action does not indicate that it is at all superior to the older turbid form of protamine zinc or to globin insulin.

THE CHARACTERISTICS OF GLOBIN INSULIN

The chemical and pharmacologic properties of globin insulin were described by Reiner, Searle and Lang[3] in 1939, although globin insulin had been studied for several years prior to that date. Each 100 units of insulin is modified by the addition of 3.8 mg. of globin (derived from beef erthrocytes and 0.3 mg. of zinc). The solution, which is quite stable, contains also 1.5 per cent glycerine to render it isotonic and therefore less irritating. The pH is 3.7 which is almost identical to that of regular insulin. It produces a fairly prompt onset of action (two to four hours after injection) and sustains the insulin effect for fourteen to eighteen hours. Its greatest intensity is noted in from eight to sixteen hours. This variability of duration of effect is related to the size of the dose, the severity of the diabetes, and the insulin sensitivity of the individual patient. It is preferable to give globin insulin thirty to sixty minutes before breakfast, thereby allowing for the moderate delay in onset of its action. Maximum effect may be expected during the middle of the day, afternoon and evening, with waning of its action during the night. Thus, the increased need for insulin during the daylight hours and the corresponding decline of the nighttime requirement is met. Advantage is thus taken of the action of the endogenous insulin which in a given individual may be sufficient to take care of the fasting or basal requirement of the patient when aided by this type of exogenous insulin capable of handling the postprandial hyperglycemia.

Recognizing some of the disadvantages inherent in the protamine zinc-crystalline mixture, we began the use of globin-crystalline combinations about two years ago and, as indicated in table 1, 125 patients are receiving such a mixture. This somewhat experimental procedure has led to the following conclusions:

1. The most desirable proportion of the two insulins differs in comparison with the protamine-crystalline mixtures. In this combination 1:2, 1:1 and 2:1 of crystalline and globin respectively seems to be the most efficient. The 1:1 proportion is employed most often.

2. Globin, crystalline and regular insulin all being clear solutions mix very readily in the syringe. The pH of the resultant mixture remains about the same as that of its components. For this reason, the known and desired effect of each of the insulins (subject as it is to variations in the pH values) is retained in the mixture. This is not true of mixtures containing protamine zinc insulin. The addition of unmodified insulin to protamine produces a somewhat unpredictable shift in its pH value and, therefore, in the rate of absorption of the resulting mixture. In other words, there is a certain interaction between protamine zinc insulin and crystalline which leaves one a bit uncertain as to the exact amounts of each remaining in the mixture. We still believe that if protamine and crystalline are to be used, it is more logical to give them in separate injections.
3. The addition of crystalline to globin sometimes further decreases the rate of action of the latter. In a few cases, if the dose of the globin compound is 30 units or more, its effect may still be noted at the end of twenty-four hours but always in less degree than when protamine is used.
4. In case the action of the globin component of the mixture is prolonged, there is a concomitant reduction of the intensity of its action.
5. The dosages most frequently employed are: crystalline 20, globin 40; crystalline 25, globin 25; crystalline 40, globin 20. There is, of course, considerable individual variation. For instance, crystalline 20, globin 35 is considered a 1:2 mixture.
6. Hypoglycemic reactions are minimal in number. If present, they tend to occur between 4 p. m. and 8 p. m. and, therefore may be more easily recognized and combatted than those developing during the hours of sleep.
7. Reactions tend to be of the vasomotor type with less involvement of the cerebral cortex.
8. The incidence of skin reactions and of fat atrophy is very low. The allergenic properties of globin seem to be about equivalent to beef insulin.
9. The use of a fouurth or night feeding has become almost routine when protamine is being administered. It is more desirable to give this feeding at 3:30 p. m. when globin is being used. A carbohydrate distribution of breakfast 0.2, noon meal 0.3, 3:30, 0.1 and evening meal, 0.4 seems to be the most practicable and satisfactory for use with globin.
10. In industrial communities certain diabetic patients will be employed in plants which require a change of shift usually on a weekly basis. Neither employer nor union will agree to the assignment of these people to a permanent shift. Thus, the patient's hour of arising and his "breakfast time" vary from week to week. When protamine insulin is used, there is the constant risk of hypoglycemic reactions due to the retardation of action with the resultant summation of effect on each changeover day. The use of globin or globin mixtures with shorter and more predictable insulin effect has solved this very real problem for 11 of my steel workers. Globin insulin has been a real boon for the swing shift.
11. "Satisfactory control" as defined above is attained in approximately twice as many patients as when protamine zinc insulin is the slow-acting component of the mixture. This is in accord with the observations of Roberts and Yater.[2]

In other words, the use of globin-crystalline mixtures has enabled us to give a sufficient quantity of insulin in one injection to maintain blood sugar within acceptable limits for a period of twenty-four hours and at the same time avoid undesirable hypoglycemic reactions. It may be argued that the same thing can be accomplished with protamine-crystalline mixtures. To this we agree; but in our experience smooth and efficient control may be attained in many more instances (approximately a 2:1 ratio) by the careful manipulation of the globin-crystalline mixture.

Very little experience has been had by us at this time relative to the employment of globin in combination with protamine insulin. When so used, it must never be as a mixture but as separate injections. We are now experimenting in certain very difficult "brittle" cases with globin as a morning injection and an equal dose of protamine at noon. In several similar cases we are trying the effect of 2/3 of the estimated dose of globin in the morning and 1/3 at 6 p. m. Although the results with both schemes are encouraging, it is too early to evaluate the results in either.

SUMMARY

1. Globin insulin is a clear, stable solution with a moderately rapid effect which reaches its peak of intensity in eight to sixteen hours after injection with progressively waning effect from the sixteenth to the twenty-fourth hour. It is relatively nonallergenic.

2. When used alone, its action is somewhat similar to that of a 2:1 mixture of regular and protamine insulin.

3. Its maximum activity is exerted during the daytime, namely, during the period when insulin is most needed to control postprandial hyperglycemia. The total duration of effect is four to twenty-four hours, depending upon the size of the dose.

4. Nocturnal hypoglycemia is avoided since the period of greatest intensity of action is from 4 p. m. to 8 p. m. If reactions occur at this time, they are easily combatted or prevented by shifts in carbohydrate distribution.

5. Extemporaneous insulin mixtures have been found to be of great advantage in the treatment of patients with moderately severe and severe diabetes.

6. Globin insulin is well adapted to mix easily with other clear insulins. In such mixtures it retains its individual physical properties. For this reason, its effect is predictable with consequent ease of adjustment of dosage.

7. In a series of 386 patients currently under observation, 199 are receiving mixtures of slow and rapid insulin. One hundred twenty-five of these patients are being treated with the combination of globin and crystalline insulin. The conclusion is reached supported by a review of the evidence that this combination provides the most efficient insulin control for the largest percentage of patients with severe and moderately severe diabetes.

In relating our conclusions, we do not wish to imply that all of the patients in this group are smoothly and uniformly controlled at all times. Such is not the case. There remain the difficult patients who never respond satisfactorily to any scheme of therapy be it globin insulin, sauerkraut juice or anything else and for whom we most compromise our standards, and conclude that the best possible result has been obtained under the existing conditions.

REFERENCES

1. Collens, W. S., et al: Am. J. Med., Vol. 3 (August) 1947.
2. Roberts, J. T., & Yater, W. M.: Ann. Int. Med., Vol. 26 (Jan.) 1947.
3. Reiner, L., et al: Proc. Soc. Exper. Biol. & Med. 40:171, 1939.
4. Page, R. C. & Bauman, L. J.: J. A. M. A. 124:704, 1944.

Out of some 14,500 soldiers treated for spinal meningitis during World War II, all but 300 recovered. Sulfadiazine and penicillin, and prompt diagnosis, are responsible for controlling the infection.—R. N.

SURGICAL TREATMENT OF CONGENITAL RECTO-URETHRAL FISTULA

(REPORT OF A CASE)

By
JOHN E. CANNADAY, M. D., Charleston, W. Va.,
and
CHARLES J. HARKRADER, JR., M. D., Bristol, Tenn.

Congenital anomalies of the anus and rectum are rather uncommon. Ladd and Gross estimate their incidence at about 1 in every 5,000 newborn infants, and report 214 such anomalies in 155,997 patients admitted to the Boston Children's Hospital. Of this group, 12 (all males) had recto-urethral fistula, of which number 2 were cured by surgical means. Among the remaining 10 patients not cured there were 7 deaths. Because of the rarity of the condition and the relatively small number of operative cures, we present the following case. We realize that the difficulties encountered by us probably were not so great as those in the cases reported by Ladd and Gross, their patients being of a much younger age.

A discussion of the embryology of congenital recto-urethral fistula would be superfluous. Rather, one is referred to the excellent discussions by Ladd and Gross, and by Thunig. Suffice it to say that in such cases there is an incomplete obliteration of the cloacal duct which should close by the seventh week of fetal life. As might be expected, this anomaly often is associated with atresia or other abnormality of the anus.

CASE REPORT

G. D., a 14 year old white boy, was admitted to the Charleston General Hospital August 6, 1946, complaining of fecal incontinence and leakage of urine through the anus. The patient stated that this condition had been present for as long as he could remember. His mother stated that during his infancy the patient passed feces in his urine and that his stools often were ribbon-like, but that she thought nothing of it until he was about six months old when, on the occasion of trying to administer an enema, she was unable to insert the enema tip. She took the child to a doctor who performed an operation on the patient's anus. Following the operation the boy lost some of his previous bowel control, and there was leakage of urine through the anus. He managed to go to school intermittently, but his clothing was always wet with urine and oftentimes soiled with feces.

Approximately two weeks before the patient was seen by us, he was treated elsewhere for bladder stones. According to the patient, the bladder stones were removed by passing an

instrument through the anus. The patient stated that his condition following the removal of the stones was worse than it had been previously, there being a steady drip of urine through the anus, and that whereas formerly a part of his urine had passed through the urethra, none now was voided through the normal channel.

It was noted on examination that the patient was lying in bed in a pool of urine. He appeared generally well developed. The penis appeared to be normal. The anus was represented by a crescentic, indurated, patulous opening through which a steady flow of urine was draining. There was no anal canal and no noticeable sphincter action. Because of the rigidity of the margins of the anus, the examining index finger could not be inserted.

The patient was seen in consultation with Dr. G. G. Irwin who examined him cystoscopically. The bladder was intact. Both ureters were catheterized, and there was normal excretion of indigo carmine from both kidneys. A large recto-urethral fistula was visualized. Doctor Irwin was able to introduce a finger into the anus with the patient under anesthesia, and a large defect in the anterior rectal wall was noted.

Operation was delayed due to an upper respiratory infection. A preliminary temporary colostomy was performed August 28, 1946, a loop colostomy of the sigmoid colon being established. The colostomy functioned well and gave almost complete fecal diversion.

Preliminary catheterization of the ureters was performed September 12, 1946 by Doctor Irwin who reported the presence of several urethral strictures which made the passing of a 16 French cystoscope difficult. With the urethral catheters in place, a modified Young-Stone type of procedure was carried out. A racquet-shaped perineal incision was made, encircling the anus at the muco-cutaneous junction and extending forward about one inch in the midline. No sphincter muscles could be identified. The lower part of the rectum was mobilized and the fistulous region on the anterior wall exposed. The fistulous tract was divided. The fistula was approximately 1.5 cm. in diameter but was quite short, so that there was no tract to excise. The ureteral catheters were removed. A metal urethral sound was passed to the site of the fistula by an assistant. A rubber urethral catheter was threaded on the sound and thus passed in retrograde fashion through the anterior urethra. The tip of the urethral catheter then was passed upward into the bladder. The opening in the urethra was closed over the catheter with interrupted sutures of no. 40 cotton thread. The rectum was mobilized to a point about 2 cm. above the level of the fistula. The fascia, the transverse perineal muscles and the levator ani muscles then were sutured in the midline with interrupted no. 40 cotton thread sutures in such a manner as to interpose as much tissue as possible between the urethra and the rectum. The levator repair was carried as low as possible so as to promote fecal continence. A rectal cuff was excised just above the level of the fistula and the proximal rectum then was sutured to the peri-anal skin with interrupted sutures of no. 40 cotton thread. The peri-anal wound was not drained. It was decided not to perform a suprapubic cystostomy at this time. The urethral catheter was sutured to the glans penis and connected to a bedside drainage bottle.

The patient was given penicillin 50,000 units every three hours for fifteen days. By the second postoperative day there was moderate edema of the penis and posterior portion of the scrotum. Since it was feared that urinary extravasation was developing, the patient again was given a general anesthetic and suprapubic cystostomy was performed. At the same time a drain was introduced into the perineal wound by means of a clamp. The urethral catheter and the perineal drain were removed at the end of one week. By this time the edema had begun to subside. The suprapubic catheter was left in place for nineteen days and on its removal the patient was voiding incontinently through the urethra. The suprapubic wound healed promptly. After the administration of sulfasuxidine Gm. 12 daily for one week, the colostomy was closed October 25, 1946. Within four days the patient was having bowel movements through the anus. Fecal continence was complete and almost immediate.

The patient's bladder capacity increased gradually. By the time of his discharge from the hospital November 5, 1946, he could hold his urine for an hour or more, and could tell when he wished to void. Marked stress incontinence still was present. Urethral dilatation was carried out on two occasions and a no. 14 French sound introduced. The patient was instructed to return for subsequent urethral dilatations. He returned November 13 with acute swelling and tenderness of the right epididymis which responded rapidly to treatment with penicillin and sulfadiazine. He was discharged November 26, 1946. He returned January 6, 1947, at which time the urethra was dilated to a no. 18 French catheter, and he was asked to return for dilatation in three months. When seen at the end of three months' time he stated that his fecal control was perfect and that he could hold his urine for approximately two hours, but that it dribbled moderately on exertion.

The patient was seen some time during the latter part of 1948. At that time there was no urinary leakage from the rectum. He has to have a sound passed from time to time to keep the anterior urethra patent but, at times, the urethral stricture has almost closed off before he will consent to having this done. The parents apparently do not exercise much parental authority and allow the patient to neglect himself.

COMMENT

A number of operative procedures for the cure of recto-urethral fistula have been described from time to time. However, the results were uniformly poor until Young and Stone devised their radical operation. Lahayville and Chauvin stress the importance of interposition of the levator ani muscles in the cure of this condition. Watson and Knapp, also Gaston, have described operations which include proctotomy as one of the steps. The most popular procedure has been the one described by Young and Stone in 1913, later modified by Young. It embodies several of the principles which have been stressed by other surgeons. Its salient features are the mobilization and excision of a cuff of rectum including the fistulous opening in accordance with the Whitehead principle, closure of the urethra, interposition of the levator ani muscles and fascia in the midline, and suprapubic drainage.

We deviated from the Young-Stone procedure in several respects. First, we established a temporary colostomy as we felt that the condition was sufficiently serious to justify our being rather radical and since it was believed that the chance of success was infinitely greater with the first attempt than it could be with subsequent attempts. We employed small Ferguson needles and interrupted cotton thread sutures. We sutured the urethra over a rubber catheter and left this in place for one week, because the fistulous opening involved a moderate portion of the circumference of the urethra and we felt that the catheter would help in maintaining a lumen. We did not establish suprapubic drainage or drain the perineal wound at the time of the fistula repair, but did both of these as a secondary procedure on the second postoperative day. In the future we would certainly establish such drainage primarily.

SUMMARY

Congenital recto-urethral fistula is an anomaly not often seen. A report of a case of congenital recto-urethral fistula associated with anal incontinence is presented. A cure was effected by a modified Young-Stone operation. It is felt that the addition of a temporary colostomy in such cases is advisable.

REFERENCES

1. Ladd, W. E., & Gross, R. E.: Abdominal Surgery of Infancy and Childhood, Philadelphia, W. B. Saunders Co., 1947.
2. Ladd, W. E., & Gross, R. E.: Congenital Malformations of Anus and Rectum, Am. J. Surg. 23:167-183, 1934.
3. Thunig, L. A.: Atresia Ani Urethralis, Arch. Surg. 38:501-527, 1939.
4. Young, H. H., & Davis, D. M.: Practice of Urology, Philadelphia, W. B. Saunders Co., 1926, p. 582.
5. Lahayville, C.: L'Interposition des Releveurs dans la Cure des Fistules Uretro-Rectales, Marseilles Med. 2:224-230, 1930.
6. Chauvin, E.: Traitement des Fistules Uretro-Rectales en Particulier par la Myorraphie Interuretro-Rectale des Releveurs, Presse med. 38:1763-1764, 1930.
7. Watson, E. M., & Knapp, L. S.: A Simplified Technique for the Cure of Urethro-Rectal Fistula, J. Urol. 49:488-492, 1943.
8. Gaston, C. D., & Lee, A. B.: Recto-Urethral Fistula: An Operation for Its Cure, Am. J. Digest. Dis. and Nutrition, 2:744-746, 1936.
9. Young, H. H., & Stone, H. B.: Operation for Recto-Urethral Fistula, Tr. Am. Assoc. Genito-Urinary Surg., 1913.

MELANOMA

Melanoma is one of the most vicious of tumors. It is surely fatal to the untreated patient and to the patient in whom distant metastases exist before treatment is begun. Nor is it a rare tumor; one melanoma is reported for every 35 cases of skin cancer. But in spite of its frequency and its malignancy, the melanoma is not so refractory as to defy proper therapy, provided the lesion is recognized early in the course of its development.

Most melanomas arise from benign moles which undergo malignant change. Others are malignant at their first appearance. There is no way to predict which benign moles are destined to develop into malanomas. However, those that are exposed to continuous trauma and irritation are the ones most likely to become malignant. The mole that suddenly appears, or one that begins growing, changing color, ulcerating, or bleeding must be regarded with suspicion. A pigmented halo around a mole may indicate malignant spread beneath the skin.—Texas Cancer Bulletin.

HEADACHE

Headache is probably the most common complaint of mankind. It has been estimated that 70 per cent of the population has had headache at one time or another. At times in clinical practice it seems that this figure should be put at 100 per cent. No more difficult problem comes into the physician's office than the patient who has had "headaches all her life," or "a headache every day."—Joseph B. Stevens, M. D., in North Carolina Medical Journal.

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

TRENDS IN TUBERCULOSIS PROGRAMS*

By MARY DEMPSEY, Statistician,
National Tuberculosis Association,
New York, N. Y.

Recently I was asked to speak at the annual meeting of a tuberculosis association and the subject assigned was "Changing Battle Lines on the Tuberculosis Front". This title struck me as rather sensational at first but as I thought more about it, I came to the conclusion that it was a very appropriate description of the present status of the tuberculosis control program.

When tuberculosis associations were first organized, the major emphasis was placed on the importance of making patients comfortable since before long they would undoubtedly die in any case. One bed per annual death was deemed sufficient in those days when we had the era of open-air schools, the freezing and overfeeding of patients, the Modern Health Crusade and many other activities long since considered obsolete. At that time most local associations provided direct relief for patients, while concentration on tuberculosis among children was general. This, then, was the first battle line.

The second phase was represented by adoption of a broad educational campaign for control and prevention of the disease. This second battle line was featured by increasing emphasis on hospital facilities (so that patients with active disease might be segregated), better means of diagnosis, development of thoracic surgery, extension of public health nursing activities and improved standards of living.

The last war and with it, the change in psychologic attitudes, brought on a third battle line. The era of mass case finding began when public and private agencies in charge of tuberculosis control programs assumed an active rather than a passive attitude in that they examined the healthy population to find unsuspected cases instead of waiting for symptoms to appear when it was often too late to effect a cure.

During the past decade when this third phase has been in evidence, hospital and diagnostic facilities have been still further augmented and improved; the comprehensive health education program has gone into higher gear; rehabilitation activities have reduced the number of relapses and consequent readmissions to hospitals; additional county public health units have been organized, as well as many more local tuberculosis associations; chemotherapy has come to the fore; laws abolishing the means test as a prerequisite for hospitalization of the tuberculous have been passed by five state legislatures (two additional states have eliminated it by other methods); greatly increased appropriations for the tuberculosis program have been made available for the U. S. Public Health Service, the Veterans Administration, the Federal Office of Vocational Rehabilitation and many state health departments.

Today we have in sight a fourth battle line toward which several of our states are already advancing. This phase represents the eradication of tuberculosis altogether. At this time ten states have annual tuberculosis death rates below 20 per 100,000 population; of these, six have rates below 15.

At the present rate of decline the tuberculosis mortality rate in the United States probably will drop to about ten or twelve per 100,000 population by 1960. When that happens in a given state, we may accept the fact that the disease has been reduced to a minimum in that area and ultimate eradication will be in sight to the extent that smallpox and typhoid fever have been eliminated.

West Virginia, with a somewhat higher than average tuberculosis death rate, is now in the third phase of this program and the fourth battle line is not yet in sight. In 1946 the state's tuberculosis death rate was 39.7 per 100,000 population, while in the country as a whole the rate was 36.4. In addition to a 200 bed hospital for tuberculous veterans, 1,354 hospital beds are available for the care of the tuberculous residents of the state, of which group approximately 700 die each year. Applying standards for hospital facilities which are accepted elsewhere, West Virginia needs at least 400 additional beds at the present time.

In 1945 deaths from respiratory tuberculosis occurring outside institutions in the state of West Virginia comprised 51 per cent of all deaths from this cause. This statement means that more than half of the number of patients who died succumbed at home. Only ten states had worse records in this respect. The proportion of tuberculosis deaths occurring outside institutions is usually considered an index of the extent to which infection is being spread in a given community. In West Virginia the record is bad. Not only should additional hospital beds be provided, but more general use should be made of the existing facilities.

What are the reasons which keep patients with active disease from accepting hospital care? Ordinarily, patients do not wish to leave their homes for protracted periods but at the same

*Presented before the annual meeting of the West Virginia Tuberculosis and Health Association at Huntington, Sept. 15, 1948.

time those who are intelligent do not wish to expose their families to the spread of infection. It is therefore sometimes easier to meet objections for family reasons than those based on economic reasons. The fact that a patient in limited circumstances must pay for his hospital care or be adjudged a pauper frequently militates against his entering a public sanatorium.

In most states with large rural areas many of the residents may own their homes, small farms, or other tangible property; yet they and their families are dependent on current wages for subsistence. When such a patient accepts hospitalization in a public sanatorium he must deed his property (or some part of it) to the state or county in order to meet the cost of his care. As a result, he is often reluctant to enter a hospital for long-term treatment and continues to spread infection at home where he is unable to provide himself with proper medical attention by a private physician.

Studies made in the county tuberculosis hospitals of New York State indicate that over a period of years less than 4 per cent of the cost of maintenance has been derived from patients or their families who have been able to meet all or part of the cost of hospital care. If this is true of New York State, the percentage of West Virginia patients able to finance their own care would presumably be even smaller since the per capita income in New York State was $1,781 in 1947 compared with $1,031 in West Virginia.

In an effort to solve this problem of hospitalizing all patients with active disease, five state legislatures have passed laws which are usually referred to as "abolition of the means test". These states are Arkansas, Illinois, Michigan, New York and Wisconsin. In these states any legal resident, regardless of his financial status, may be cared for in a public tuberculosis hospital free of charge. Such a law serves to remove one of the most serious stumbling blocks which constitute a hindrance to hospitaliziation when needed.

An objection to free hospital care is sometimes raised on the ground that the relatively few wealthy residents of a state should be compelled to pay. Such an objection is untenable since well-to-do persons rarely decide to enter public institutions; as a matter of fact, they usually prefer to attend private hospitals or to live in resort sections of the country and be treated by private physicians under conditions which prevent the spread of infection.

West Virginia is faced with a rather unusual situation in regard to compulsory payment for hospital care. Among the gainfully employed persons in this state coal miners are in the majority. Not so many of these workers own property as is the case in primarily agricultural states. On the other hand, once a miner is diagnosed as tuberculous, he receives an allowance in the neighborhood of $100 each month from the welfare fund of the miners' union. Under present conditions, if he accepts hospitalization he must contribute a sizable amount of his monthly income to finance his care, leaving his family to exist on an inadequate amount or to apply for relief which ordinarily is likewise inadequate.

Probably one of the quickest ways to minimize the spread of tuberculosis and to reduce the death rate among West Virginia residents is to influence the state legislature to pass a law abolishing the means test as a prerequisite for entrance to public sanatoriums. After such a law is passed presumably far less than 51 per cent of the tuberculosis deaths in this state would occur outside institutions and the spread of disease would be greatly curbed. It is true, of course, that some of those who die at home have left hospitals to go home to die. Obviously, that practice in itself is one way of causing widespread infection.

Once the means test has been abolished, a second method of expediting a drop in the tuberculosis death date is to provide the additional beds needed for adequate care. Occasionally, an objection is raised to the plan of building additional hospitals for the tuberculous on the ground that the death rate is declining rapidly and that therefore such institutions will not be needed after a few years. In West Virginia, where 40 persons out of every 100,000 die of tuberculosis in a year, this argument scarcely seems valid. Even if we knew, however, that tuberculosis would be eliminated within a certain number of years, it would still be advisable and economical to construct additional hospital facilities at this time, provided an adequate supply of competent personnel is available.

One of the pressing needs in the field of public health is that of supplying adequate hospital facilities for persons with chronic disease such as cancer, heart disease, nephritis, arteriosclerosis or allied ailments. In view of the fact that our population is aging so rapidly, the need for such institutions is becoming and will become more acute. Thus, when tuberculosis has been minimized to the extent that some of the hospitals for the tuberculous are no longer needed, these sanatoriums may be transformed into hospitals for the care of patients with chronic diseases at very little expense.

The economic advantage to a state of eradicating tuberculosis is enormous. Not only will

the cost of medical and nursing care (including hospitalization) for tuberculosis be reduced to the vanishing point, but the costs in welfare funds of maintaining families while the breadwinner is ill, as well as in pensions for the tuberculous veterans, workmen's compensation, and endless other necessities will be eliminated. In the aggregate these costs amount to $300,000,000 or $350,000,000 a year in the United States.

Then, too, the so-called "hidden costs" of tuberculosis will tend to disappear. These hidden costs, including loss of wages and loss in production during long periods of illness, likewise amount to hundreds of millions of dollars a year.

Throughout this meeting it has been evident that the tuberculosis control program in this state is in excellent hands. In particular, the working agreement between the public and voluntary agencies seems excellent. In the Christmas Seal Sale the state gives a good account of itself since, among the states, West Virginia ranks 36th in the seal sale per capita and 39th in per capita income. With reference to the tuberculosis death rate, the state ranks 35th.

West Virginia's primary need in the campaign to eliminate tuberculosis seems to be additional hospital facilities and greater use of existing beds. To facilitate these improvements and to advance to that fourth battle line which represents the ultimate goal, no one phase of activity is of greater importance than the passage at an early date of a state-wide law abolishing the means test as a prerequisite for hospitalization of the tuberculous in public hospitals.

LEAD POISONING IN CHILDREN

Epidemics of lead poisoning among children have been reported from time to time. Such an epidemic in Australia was traced to the ingestion and inhalation of lead dust from painted verandas, and in Japan to the absorption by infants of toxic amounts of lead from cosmetics and face powder used by their mothers. More recently the use of disused storage battery casings as fuel in poor homes in the U. S. A. has caused lead poisoning, and a number of cases in children have been reported from Baltimore and New Orleans.

Children are more susceptible and react more quickly and to smaller doses of lead than adults. The symptoms may also differ in that the most dangerous manifestation of plumbism, meningo-encephalitis, is more frequent than the peripheral neuritis and lead palsy of adults. Children tend to develop a black deposit of lead sulphide on the teeth; this is not identical with the "blue line" seen on the gums in adult lead poisoning. Furthermore, the most rapid and reliable method of diagnosis in children—radiographic examination of the bones—is not applicable to adults, because lead is deposited in radiographically demonstrable amounts only in actively calcifying bone.—British Medical Journal.

CARCINOMA OF THE UTERUS*

By B. T. BEASLEY, M. D.,
Atlanta, Georgia

That progress has been made and is being made in the early diagnosis and treatment of cancer is proven by statistical records now available from many sources. Even so, too many people are losing their lives as a result of this dread disease. New methods of early diagnosis must be found. Educational campaigns must be conducted for both lay and professional groups. A greater number of technicians must be trained in the study of diagnostic methods now available if medical science would hope to make progress comparable with other branches of science. Medical colleges should arange their curricula to train more technical experts and fewer specialists. Hospital laboratories should be equipped with better facilities in both personnel and material for making diagnosis, and a trained pathologist should be available in every operating room.

Papanicolaou calls attention to the birth of a new "branch of the morphological sciences; that of the comparative cytology of exfoliated cells found in body cavities." Whether this discovery can be translated into practical significance and cancer cells found before tissue invasion is begun, will be determined by trained technical experts. The busy doctor will never have sufficient time to devote to the technical requirements for the recognition and differentiation of the structural variations in the normal and abnormal cell forms of cancer. Warren says that "histologic diagnosis and classification of tumors is the sheet anchor of the treatment of cancer". This statement is true in the management of the tumor growth, but what about a scientific approach before the tumor is formed? We are interested today in prevention as well as treatment. The American Cancer Society is emphasizing control. It will be difficult to control cancer unless we are able to find it early enough to prevent its invasion of tissue.

According to Papanicolaou, Traut and Meigs, the vaginal smear method for the detection of cancer cells, quoting Warren, "may give information not available by biopsy and curettage, and will demonstrate symptomless cancer". Warren states further, however, that "In spite of its apparent simplicity and accuracy, the method is not an easy, sure means of diagnosis".

The usual symptoms of cancer of the uterus:

---

* Presented before the organization meeting of the West Virginia Section of the Southeastern Surgical Congress, at Huntington, September 4, 1948.

abnormal bleeding and foul discharge, are late manifestations whether the lesion is in the cervix or in the fundus. By the time these symptoms appear the walls are already invaded by cancer cells. It is at this stage that the surgeon is called upon to make a diagnosis and render treatment.

Cancer of the cervix occurs eight times more often than that of the fundus, and approximately ten years earlier in life. Approximately 80 per cent of cervical cancer belongs to the epidermoid or squamous cell variety. The number of five year cures in grades one an two operative cases is about the same whether surgery or radiation therapy is used and varies, according to different authors, from 15 to 65 per cent.

Bowing and Fricke, of Rochester, reported from the Mayo Clinic, in a paper entitled "Late Results of Radium Therapy for Carcinoma of the Uterine Cervix" (Journal of the American Medical Association, July 10, 1948), a five year survival of 58.8 per cent in stage I, 65.3 per cent in stage II, 33.7 per cent in stage III, and 16.5 per cent in stage IV. This report covered 2,246 cases over a period from 1915 to 1944 inclusive, 85 per cent of which had advanced carcinoma when treated.

Cancer of the fundus occurs later in life, usually after the menopause, and the cells belong to the glandular or adenocarcinomatous variety. The number of five year survivals appears to be greater after radium or roentgen ray therapy than after surgery.

Is cancer on the increase? According to Ochsner, DeBakey and Richman, "The incidence of bronchiogenic carcinoma has increased more than cancer anywhere else in the body. In Georgia the mortality rate from primary malignancy of the respiratory tract has increased progressively from 23 per 100,000 population in 1934 to 200 deaths in 1943." This disease ranks second among all diseases causing death. If it is increasing, why is it? I quote from a paper, "Preventable Human Deterioration", by Edward L. Bortz, President, American Medical Association, published in the Missippi Medical Journal of July, 1948: "Is society deteriorating? Are we as human beings deteriorating? As we stand at the dawn of a new era—the atomic age—with all its promise of longer life and the control of those destructive forces which annihilate our loved ones, will medicine furnish the leadership and take its place in directing researches for the further limitation of human afflictions, and for the control of those forces which will bring a more stable social order?"

Could it be that the discovery made by Papanicolaou is the beginning of the control of cancer? It is claimed that the percentage of malignant cases recognized by the smear method has ranged between 94 per cent and 80 per cent in different hands and that malignant cells were found in symptomless cases in 0.4 and 1.6 per cent in the examination of two groups of apparently healthy women.

Maurice Fremont-Smith and Ruth M. Graham of Boston reported in the Journal of the American Medical Association, July 10, 1948, in a paper entitled "The Vaginal Smear Method", 2 per cent positive findings in 200 patients unsuspected of cancer.

In our group of cases during 1947 we found cancer cells in 0.5 per cent of the symptomless cases examined at the Cancer Detection Center of the Sheffield Cancer Clinic in Atlanta.

Oschner and others, in discussing bronchiogenic carcinoma, state that "An extremely valuable diagnostic method is the demonstration of tumor cells in the sputum or in the aspirated bronchial secretion. This procedure, although tedious and time-consuming when performed by a competently trained individual, gives a correct diagnosis in 90 per cent of the cases."

A great deal of investigation and study is now in progress. If the smear method proves to be an effective means of detecting cancer cells before symptoms are present and before tissue invasion has begun, no physical examination will be complete until a study of the secretions from all body cavities has been made.

What is cancer? Is it a manifestation of body deterioration due to perverted physiologic processes—to environmental changes— to nutritional disorders—to endocrine imbalance? Is it an allergic manifestation? Just why do normal cells take on abnormal and belligerent growth? How early does this wild orgy begin in the body? We see it in infancy as well as in middle life and old age.

Some of these questions are discussed in a paper entitled "The Meaning of Cancer Research" by R. R. Spencer, M. D. of Washington, D. C., which appeared in the Journal of the American Medical Association, August 14, 1948. The author refers to what the late Dr. James Ewing called "the causal genesis" of cancer, i. e., the multiple external and internal environmental agents and conditions that start the carcinogenic process but are not essential thereafter to its continuation.

Prior to the early part of the 20th century diabetes was a scourge as great and difficult to

manage as cancer is today. In 1922 Banting and Best gave to the world the answer to this mysterious disease. Cancer research will some day give the answer to the mysteries of cancer. What it is and how to prevent or cure it.

During the past year forty-six cancer control projects have been approved by the Federal Security Administration and $766,748.00 have been granted to finance these projects. In addition to these, three new grants totaling $1,134,-368.00 have been made for cancer research.

SUMMARY

1. According to available information, cancer is on the increase.

2. Present methods of diagnosis and treatment lengthen the span of life in cancer sufferers, and 3 to 5 year cures of cancer of the uterus are obtained in 15 to 65 per cent of the operative cases whether treated by radiation or surgery or a combination of both.

3. The smear method of detecting cancer cells in body secretions devised by Papanicolaou is approximately 90 per cent accurate.

4. Larger numbers of trained technicians must be secured and some method of financing projects must be found if this method is to be utilized to its greatest advantage in detecting cancer cells before the usual signs of cancer develop and tissue invasion is begun.

5. The cancer research programs should be supported by the medical profession.

6. Augumented efforts in early diagnosis of cancer should be made by every practicing physician.

7. More time on our larger surgical and medical programs should be devoted to cancer research discussion.

8. The scientific control and cure of cancer will be possible only after its cause is discovered.

IF THE COUNTRY DOCTOR DISAPPEARS—

If the country doctor disappears—and this is a possibility—then we must resign ourselves to an increasing maternal and fetal mortality. We must resign ourselves to neglected emergencies, to delayed surgery, to moribund medical cases. In short, we must prepare for an ever-increasing volume of cases which are complicated by self-diagnosis and self-treatment. And if this be the decision of organized medicine and of the general population of this state, then we must hold ourselves responsible for the medical neglect of a large percentage of our population.—Geo. F. Bond, M. D., in N. C. Med. J.

THE INFANT'S GROWTH POTENTIALS

The mechanisms of human growth are culminating end products of ages of evolution. The race evolved; the child grows. Each and every part of the child's makeup has to grow—bones, brains, and behavior. The laws of growth are as ubiquitous and pervasive as the laws of gravitation or of atomic energy.

The child's abilities and his educabilities are governed by the underlying maturity of his behavior patterns. The forms and lawful sequences of growing behavior patterns can be defined by the life sciences, including a clinical science of child development. More knowledge needs to be applied at the beginnings of the life cycle to reduce the mounting tide of adolescent instability and of adult abnormalities of behavior.

Through broadened methods of developmental diagnosis and supervision in infancy, through individualized growth guidance in nursery and elementary schools, we can strengthen the stamina of the child and of the family unit. We can discover distinctive gifts and talents in the early years of life. We should place more stress upon the positive and constructive expressions of child development, particularly in the first 5 years of life, which are basic for all later developments.

The intrinsic badness of children has, in my opinion, been vastly exaggerated by distorting interpretations. Well-constituted children with healthy inheritance have an intrinsic charm—a charm which betokens intrinsic goodness. The growth potentials for good exceed those for evil, unless the cultural odds are too heavily weighted against the child.—Arnold Gesell, M. D., in Science.

BREAST CANCER MOST FREQUENT IN WOMEN

The breast is the most common site of cancer. According to Haagensen it is twice as frequent as any other type of cancer in women, and about 4 per cent of all adult women contract the disease. Moreover, if cancer of the breast is diagnosed early, which means before there is evidence of metastases, 75 to 85 per cent of those properly treated will be well and free from evidence of disease in 5 years. If, on the other hand, the diagnosis is made late or if the treatment is poor, the results will be poor and not more than 25 to 30 per cent of these patients will be alive and well after 5 years have elapsed.

There is, then, a truly great incentive to early diagnosis and early treatment.—Leland S. McKittrick, M. D., in Supp. to Conn. St. Med. Journal.

DANGER! POISON

After all the warnings that have been given and the tragic incidents reported in the press, it is hard to understand why anyone would store disinfectants, insecticides, and similar materials near food, food containers, or medicines. But this dangerous practice and others like it persist. The marked rise in deaths from the barbiturates is especially disturbing. Greater control by the health authorities over the sale of these sedatives may bring about a reduction in mortality from them.—Statistical Bulletin, Metropolitan Life Ins. Co.

TUBERCULOSIS ABSTRACTS*

STATUS OF ROUTINE CHEST X-RAYING

The x-raying of general hospital admissions started in 1935 when the Wisconsin General Hospital and the University Hospital in Michigan began x-raying all admissions for a trial period. In 1938 no hospital was taking chest films of all patients but by 1943, 56 teaching hospitals professed to be taking routine chest x-rays and in 1945 eight per cent of general hospitals indicated that they were taking routine films.

The Current Survey

When information on the subject was sought in the spring of 1948, the data available from groups such as the National Tuberculosis Association, the Public Health Service, the American Hospital Association and the Veterans Administration were incomplete. It was decided, therefore, to proceed with an independent survey which, even if incomplete, might show trends and supplement the information already at hand.

It seemed wisest to seek information from the State Health Departments, 42 of which now have Tuberculosis Divisions and Control Directors, many of whom are working closely with the Public Health Service. Miraculously, reports were received during August, 1948 from every one of the 48 states.

A brief questionnaire was used to obtain the data and to explain the purpose of the survey. One question was stressed as being most important—"Which general hospitals in your state are now taking routine chest x-rays of all admissions?" Other questions were aimed at finding out whether plans were under way for an increased use of the method; what size film was being used; who paid for the original equipment and for maintenance; and whether cost data were yet available.

The term "general hospital" was used advisedly. There were 6,276 registered hospitals in the United States in 1947, of which 4,539 were general in type; specialty and federal hospitals were excluded. The patients of general hospitals, moreover, included 93 per cent of the 15,829,514 patients admitted to *all* hospitals, even though they had only 42 per cent of the bed capacity. It is this population—14,665,000 patients, plus another huge number of outpatients each year—which it would be most logical to examine routinely, and about which we would like to know.

Of the 4,539 general hospitals in the United States, 247 replied that they were taking routine chest x-rays. Several additional hospitals stated that they had plans and equipment for starting such a program. The equipment for routine chest x-rays was provided by the hospital in 33 instances; by the state for 110 hospitals, by the federal government for 49 and by the city and county for four. The funds for equipment for 40 hospitals were supplied by tuberculosis associations. The survey was supported by the hospital in 92 instances, by the state in 59, and by the city or county in 11. All or part of the cost was borne by the tuberculosis association in nine instances and by a direct charge to the patient in 20 instances.

The best data for costs in a large-scale operation and the best evidence that a low cost is possible come from the Johns Hopkins Hospital. The operating expense for a 70 mm. unit, including all factors, was 34 cents per patient when 1,400 films a month were taken, and 25 cents when 2,100 were taken. In community-wide surveys, which compete in some ways with hospital surveys, the Public Health Service has found the usual cost to be about 55 cents per person.

The Current Status of Routine Chest X-raying in General Hospitals of the United States, William H. Oatway, Jr., M. D., Arizona Medicine, January, 1949.

*Issued monthly by the National Tuberculosis Association and furnished through the courtesy of The West Virginia Tuberculosis and Health Association.

PROGRESS IN WEST VIRGINIA

The West Virginia State Medical Association has given its approval to bills introduced into the West Virginia Legislature providing for the establishment of a four-year school of medicine and dentistry, to be located in Charleston. Another bill provides for a state hospital at Charleston ("University Hospital") for diagnosis, treatment of chronic diseases, and rehabilitation services, including the treatment and training of crippled children and paraplegics. The services and facilities of the hospital would be available for clinical and teaching purposes for the proposed school of medicine and dentistry.

In addressing the legislature on these matters, Governor Patteson said:

"No disagreement should be found with the principle that the state owes a direct health obligation to its citizens. I do not refer to 'socialized medicine' or making our physicians servants of the state. I firmly believe, however, that our Health Department should be greatly expanded, and more emphasis placed on cancer control, venereal disease control, tuberculosis control, and the fight against infantile paralysis. We must step up our efforts to bring health services into the more inaccessible areas."

The governor of West Virginia had his feet on the ground when he framed that statement.—J. Indiana St. Med. Assn.

BALNEOLOGY

The Virginia Springs area in the Allegheny Mountains contains a great variety of well known springs. At the Medical College of Virginia is one of the centers of the Baruch Foundation for the study of Physiotherapy. Before the war, meaning 1861-65, this area was patronized by wealthy people from all over the South and the Atlantic Seaboard. Presidents and statesmen were frequent guests. Although the patrons came by stage coach or private carriages, the popular resorts like the White Sulphur Springs turned away great numbers every season. Times have changed and most of these famous resorts have closed up.

The old Sweet is an old folk's home. The Salt Sulphur looks like a ghost mining town and the Sweet Chalybeate like the habitation of ghosts. Only the Greenbrier and the Homestead have survived and they have become resorts comparable to the best European spas. Each is equipped for various forms of hydrotherapy and physiotherapy, and both have excellent physicians in charge. Places like these should become more and more important, especially since statistics show thatt he population is rapidly getting older.—Virginia Medical Monthly.

The President's Page

Again, we have temporarily lost a fight. The legislature has failed to provide for medical education and the health of our citizens. The future of medical education and health in our state is in the hands of an interim committee, from which, we must not expect too much.

The factors responsible for the loss of this fight are, (1) opposition by the administrative and governing bodies of West Virginia University, (2) state sectionalism, and (3) lack of unity among ourselves.

We owe deep gratitude to the many members of our Association who gave their time and efforts toward the building of a sound, economical and workable program. We still feel that the doctors of West Virginia know the needs for and are more capable of presenting a program of medical education for our state than any of the so-called "competent experts" that we are advised to seek.

The health of our citizens is more important than a primary, secondary or college education. It is the duty of a state to provide the facilities and the trained personnel necessary to provide health services.

We have felt that a complete medical education is a necessary part of any great university. It is certainly of more value to the citizens of a state than a school of music, journalism, engineering, law, physical education, agriculture, or the arts.

Medical education at West Virginia University made slow progress from the time it was inaugurated in 1902 until the present physical plant was occupied in 1916. Since that time, we West Virginians know that it has not only failed to keep pace with the progress of the rest of the University, but that it has deteriorated in quality and quantity. If it had not been for the constant efforts of our Association, we would have no medical education in our state today.

The present medical school building is to be torn down to make room for more progress for the rest of the University. The "if and when" attitude of the governing body of the University makes it exceedingly doubtful if a four-year school of medicine and dentistry can ever be established at our state University.

The urgent needs are still here. The eight hundred young men and women in our colleges still want to study medicine. At least 250 students want to study dentistry. It is the duty of the state to provide for a complete medical and dental education. State supported medical and dental schools have been and can still be established independently of a state university.

We are still in the fight.

Thomas G. Reed.

President.

West Virginia Medical Journal

Official Journal of
The West Virginia State Medical Association
302 Atlas Building, Charleston, West Virginia

Editor

Walter E. Vest, M. D. (1951) ..... Huntington

Managing Editor

Mr. Charles Lively ..... Charleston

Associate Editors

W. M. Sheppe, M. D. (1949) ..... Wheeling
Edward J. Von Liere, M. D. (1950) ..... Morgantown
G. G. Irwin, M. D. (1952) ..... Charleston
R. H. Edwards, M. D. (1953) ..... Welch

Editor Emeritus

James R. Bloss, M. D. ..... Huntington

Business Manager

Mr. Charles Lively ..... Charleston

Published monthly on the first day of the month, at Charleston, by The West Virginia State Medical Association.

Original articles are accepted on condition that they are contributed exclusively to the Journal.

Advertising rates furnished upon request. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the American Medical Association.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston 24, West Virginia. Telephone, Capitol 34-625.

HYPERBOLE IN HIGH PLACES

In a recent issue we called attention editorially to the statement carried in the daily press and attributed to Mr. Oscar Ewing to the effect that 325,000 persons die in the United States each year from lack of medical care. Also, when we broke these figures down to the local county level, the enormity of their exaggeration was only too obvious.

At the opening of the present session of Congress, the President, if he is correctly reported in the press, made the statement that "tens of millions" of the people of this country do not have adequate medical care. "Tens of millions" could not be fewer than twenty millions. Assuming this minimum figure was meant by our plurality President, and assuming further that the present population of the country is 140,000,000, this statement, reduced to its lowest terms, would mean, if factual, that one person in seven does not have adequate medical care. When the statement is thus simplified, the absurdity of it, in our judgment, is patent. Possibly clarification would ensue if we had, as Morris Fishbein suggests, an adequate definition of "adequate". In the meantime, let all who believe that one person in seven (certainly in West Virginia) is without adequate medical care stand and be counted.

Possibly the inflation of prices, of governmental debt, of Federal expenditures, of taxes, of finance, and of Federal payrolls has so permeated life in the Federal Capital that officialdom there falls unconsciously into corresponding inflation of statistics and speech. Be that as it may, we cannot help but deplore this tendency to hyperbole in high places. Certainly executive officers of the government should, in our opinion, limit their arguments to statements susceptible to statistical proof as facts.

BACK WHERE WE STARTED

The Legislative Interim Committee, when appointed, will literally start from scratch when the first meeting is held to consider the advisability of establishing a four-year school of medicine and dentistry in West Virginia. Not one penny of the funds included for the purpose in the budget bill as originally introduced remained there when the bill was finally passed.

The House of Delegates held out almost to the bitter end for an ear-marked $2,000,000 for the school, to be released if and when a favorable report is submitted by the interim committee, but this item vanished completely in the compromise that was finally reached by the conference committee appointed by the two branches of the Legislature.

So far as the school is concerned, the state is no worse off than when the campaign for its creation was inaugurated by the State Medical Association, except that the money that was available at the time has now been appropriated for other purposes. It might be said that we are better off in that the matter will be given further study by a legislative committee.

In the meantime, the doctor and dentist shortage continues, with very little hope that the problem can be solved within the next several years.

The young men and women taking pre-medical and pre-dental work at the University and our other colleges will continue to look not too hopefully to the future. The picture is dark for them, and unless more out-of-state schools open their doors, the great majority of these students are doomed to bitter disappointment and disillusionment.

We still maintain that West Virginia can and should provide a complete medical and dental education in this great state for our students who are eager to devote their lives to work in these two professional fields.

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

GOVERNOR CORNWELL SPEAKS

In a recent issue of the Hampshire Review, one of the State's best and most widely read newspapers, the subject of socialized medicine was discussed in connection with the reported action of a group of doctors in "climbing on the bandwagon" for socialized medicine, notwithstanding their expressed disapproval of the plan.

The Review, which is published by ex-Governor John J. Cornwell and Margaret Keller, deploring the action of the group and labeling it not only cowardly but dangerous, says "it is the attitude of the political demagogue who joins up with any gang that has the best chance of getting there first."

The Review believes that we are inviting tyranny and a totalitarian state when we advocate socialized medicine. Resistance must continue, and this well-known eastern panhandle paper very frankly discusses the responsibilities of the doctor in this fight to a finish between free enterprise and compulsion:

> When the people become too tired or too cowardly to resist encroachment on their liberties, the end of those liberties is in sight. That is written in the history of the peoples of Athens and of Rome and latterly in the rise of Hitler to power in Germany. In none of these countries did the State expand in size or in power more rapidly than it is proposed to expand our government at this session of Congress. If we say, as did those doctors: "Oh, well, it's coming, so we had as well join in," it is to invite tyranny and to deserve it.
>
> We are heading for stateism here; for the end of freedom, for a totalitarian state. Cowardly submission to belief in its inevitability is to insure that tragedy. The people can and will halt the trend if they understand its implications. It is not too late to arouse them. There is a responsibility on those who do understand to make an outcry.
>
> In the rancid Roosevelt days to talk against Communism was to be a "red-baiter". Only last summer a man named Truman called it a "red-herring", but, elected, when he came to be inaugurated, he saw Russian Communism in control of Eastern Europe, blocking all our efforts for permanent peace. He saw Communism swallowing China with its hundreds of millions of tired and dispirited peoples. He saw Communism threatening all Asia, so devoted his entire address to the subject. Was it "too little and too late"?
>
> Our people were kept in ignorance of the Communist menace. They must not be kept in ignorance of the menace of a totalitarian state in the garb of "social welfare".

CONGRATULATIONS, MERCER

It is fitting that Dr. Frank J. Holroyd should have the privilege of being the first secretary of a component society to report a one hundred per cent payment of annual dues, American Medical Association special assessment, and the state voluntary contribution by the members of a component society. Not only is Doctor Holroyd a hard-working local secretary, but he is doing a magnificent job as head of the public relations committee, which has charge of the educational campaign in this state. Congratulations to him and to the doctors of Mercer county for being the first to reach the one hundred per cent mark in 1949.

TRADING SOMETHING FOR NOTHING

It its bulletin to members (No. 185), dated March 12, 1949, the West Virginia Chamber of Commerce has this to say concerning socialized medicine and the 81st Congress:

> Socialism is the consequence, although perhaps not the objective of legislation being presented to the 81st Congress. The arguments supporting this conclusion were never better stated than by the Saturday Evening Post, in an editorial titled "We Could Slip Into Socialism While Hating It," copy of which editorial accompanies this bulletin.
>
> The compulsory "National Health Insurance" program, commonly called "Socialized Medicine", is one of the best illustrations of the current effort to adopt Socialism in the United States under the guise of an attempt to promote the "public welfare". Calling for an initial contribution of employees and employers equal to 3% of wages, the inevitable deficit on the eventual annual cost of $14 billion would be made up either by a general tax, presumably on all incomes, or a further pay roll exaction.
>
> Americans should mark the fact that a large share of the current "Marshall Plan" aid to England is required merely to make up the deficit incurred on the British "National Health" program.
>
> When Dr. Morris Fishbein, of the American Medical Association asked Sir Wilson Jameson, Chief Medical Officer of the British Ministry of Health for a single copy of every form and every regulation used and issued by the bureaucrats administering the British "National Health" Act, that witty official inquired, "Doctor, have you chartered the Queen Elizabeth to take you home?"
>
> That the American people, accustomed as they are to the finest medical service in the world, should voluntarily agree to its exchange for the type of medical service being foisted on the English is nothing short of ridiculous.

TUBERCULOSIS CONTROL

The State Legislature, at its recent session, took the logical step of eliminating the means test for admission to the state tuberculosis sanatoria. The curve of decline in tuberculosis morbidity and mortality has for the past few years shown a tendency to flatten out, and we believe that the enactment of this bill marks a real advance in tuberculosis control. The wisdom of the legislation, as a matter of public health, was so obvious that there was no opposition in either House.

This new law, admittedly meritorious and a long step forward in tuberculosis control, is only a part of what needs to be done in the eradication of the great white plague. We must continue our case finding and health education programs. Possibly complete eradication of tuberculosis is

as yet only a target to aim at, but what doctor forty years ago would have had the boldness to predict then the eradication of typhoid within the life span of men then in the active practice of medicine?

"I SAW IT IN THE JOURNAL"

In perusing the advertising pages in The Journal, it would be well for doctors to remember that all ads are carefully screened to make sure that the products described are Council-accepted. Our standards are of the highest. Our advertisers evidently like The Journal. This is why it has been selected for use in promotional programs.

The advertisers seek the patronage of the doctors of West Virginia, and their response encourages continued use of our publication. This continued patronage on the part of the advertisers helps us to produce a Journal of which we hope all members of the State Medical Association are proud.

When writing for samples or making inquiry for additional information, doctors are requested to state that the advertisement was seen in the West Virginia Medical Journal.

KEEP IT OUT

Still another letter condemning panel practice has been received by a West Virginia doctor from a doctor practicing in England.

Dr. I. Hanenson, who is an associate in orthopedics on the staff of the Williamson Memorial Hospital, is intimately acquainted with a doctor in London, who has written him concerning the plight of practitioners in that country.

> "Our main grouse," he says, "is that we are not getting paid nearly enough for the amount of work we do. We are busier because patients are going to the doctor more because they don't have to pay each time, and, as I told you when you were here, we at present get only 15 to 16 shillings ($2 to $3) per year for each person, though there will be extras for maternity work, emergency treatment, long distances travelled, etc.
>
> "At present, negotiations are going on for a higher rate of capitation payment, but as things stand the position is that a doctor, in order to make a decent income, has to take on so many patients that he can't look after them properly. But only a few doctors have these big lists. There are not enough patients per doctor in the country, and the average list is only between 1000 and 1500."

This English doctor reports that private practice has just about disappeared. The reason assigned by him is that 95% of the people in that country have registered with doctors under the National Health Service. Authorities are exercising more and more control over and interference with the practice of doctors.

Concluding his letter, this London doctor pleads with his American confrere to have nothing to do with state medicine. These are his words: "If the proposed State Service for America is anything like ours, THROW IT OUT! Don't have anything to do with it. I hope the American doctors do what we should have done if we had known better."

The way to prevent this thing happening here is to arouse our people to the point where they will in overwhelming numbers make it known to Congress that we want no part of any bureaucratic scheme that in any way smacks of socialism. It is best to KEEP IT OUT and not have to THROW IT OUT.

A CHALLENGE

Medicine has advanced more during the last twenty-five years than during the preceding century, mostly through methods of precision, specific preventive and curative agents, and in improvements in our hospitals. All of these things take trained minds and hands, and they cost money.

People will spend to the limit for non-essentials but will not provide in advance for illness, the only large expense which is unpredictable for individuals or families. When the inevitable hardship arrives, wage-earners will not condemn their own improvidence—but many will hate the medical profession and accuse it of creating unmanageable expenses.

Experience the world over has demonstrated that any full-service plan falls except on an indemnity basis. Otherwise people call for innumerable house visits, go to the doctors' offices too many times, demand eyeglasses, teeth and other protheses beyond limits of sensible propriety.

Let us not make the mistake that England did—negativism and por press relationships. Their people got the impression that the medical profession opposed State Medicine for selfish financial reasons. Consequences are now well demonstrated. Our full cooperation and demonstration of willingness to effect superior service at the level of large national accounts may save our country a similar catastrophe.—Rocky Mountain Medical Journal.

SHORT CUT TO SOCIALIZATION

Oscar Ewing has made the astonishing discovery that in any one year, even under Democratic auspices, a great many people die. It is remarkably like discovery that man is mortal and that in an infinity of years everyone will die. Against this, of course, the administration is determined to take a firm stand.

The medical system which has steadily expanded the life span of the average man gets no credit for this accomplishment. There is only blame for having failed to guarantee immortality. It is, therefore, a prime case for socialization.

Drifting is hardly the word for this process. It would be more accurate to say that the administration is racing to embrace socialism by the shortest line that politics will allow. And the excuse, of course, is that the people voted a "mandate."—Charleston Daily Mail.

GENERAL NEWS

WEST VIRGINIA DOCTORS PARTICIPATE IN FIRST AAGP SCIENTIFIC ASSEMBLY

The first annual scientific assembly of the American Academy of General Practice, held at Cincinnati, March 7-9, was a success from every standpoint. Nearly 3,000 doctors and their wives attended the general sessions, which were held at the Netherland Plaza Hotel, and the Hall of Mirrors where the session was held was crowded to capacity all three days and several hundred doctors were compelled to stand.

The scientific program provided papers on subjects of particular interest to the general practitioner, and several "rest periods" were interspersed throughout the program to afford time for the doctors to visit the technical exhibits which were set up in adjoining rooms.

The Academy, through its Congress of Delegates, voted unanimously against government control of medicine. It also approved the American Medical Association assessment to raise funds for educational purposes.

The Congress also advocated the rating of hospitals by the AMA and the establishment of general practice staffs in hospitals.

It was reported at the meeting that the Academy already has over 10,000 members.

Dr. Elmer C. Texter, of Detroit, Michigan, succeeds Dr. Paul A. Davis, of Akron, Ohio, as president. Dr. Stanley R. Truman, of Oakland, California, is president-elect, and will serve during 1950. Dr. R. B. Robins, of Camden, Arkansas, presided as speaker of the Congress of Delegates. Mr. Mac F. Cahal, of Kansas City, is executive secretary and general counsel of the Academy.

Dr. I. E. Buff, of Charleston, and Dr. Benjamin V. Blagg, of South Charleston, attended the meeting as delegates from West Virginia. The alternates, Dr. Charles N. Slater, of Clarksburg, and Dr. James C. Repass, of Lumberport, were also present.

The following officers of the West Virginia Chapter also attended the meeting: Drs. Ralph Frazier, of Grantsville, vice president; and Carl B. Hall, of Charleston, secretary. The president, Dr. Tyler R. Boling, of Grantsville, was ill and could not be present.

Other doctors from West Virginia attending the meeting included:

J. Paul Aliff, Charleston; T. M. Barber, Charleston; D. S. Benson, Moundsville; Thomas H. Blake, St. Albans; Myer Bogard, Hinton; Randall Connolly, Vienna; D. J. Cronin, Huntington; E. A. Davis, Charleston.

E. T. Drake, Williamson; John E. Echols, Richwood; Claude Frazier, Huntington; O. M. Harper, Clendenin; P. R. Higginbotham, Bluefield; L. I. Hoke, Nitro; Logan W. Hovis, Parkersburg; L. D. Jones, Pennsboro; Alfred Joseph, Montcoal; L. J. Moore, Huntington.

Franklin B. Murphy, Philippi; Curtis G. Power, Martinsburg; Donald R. Roberts, Elkins; S. B. Souleyret, Cabin Creek; and Roydice Staats, Huntington.

CREATION OF FOUR-YEAR SCHOOL TO BE STUDIED BY INTERIM COMMITTEE

Just before the Legislature adjourned, Senate President W. Broughton Johnston, and House Speaker William E. Flannery announced the appointment of the members of the interim committee which will make a study during the next two years of the advisability of establishing a four-year school of medicine and dentistry in West Virginia.

President Johnston and Speaker Flannery will be co-chairmen of the committee. The other Senate members are Don J. Eddy, Monongalia; Ward Wylie, Wyoming; A. L. Reed, Preston; and Theodore M. Bowers, Wetzel.

Mrs. Nell W. Walker, Fayette, Robert E. Roach, Hancock, H. Hayden Morgan, Upshur, and J. Allen Overton, Wood, will represent the House.

Besides considering the advisability of establishing the school the committee's survey will include a study of the matter of location. The committee is empowered to call upon any of the departments of the state government for information, and may also summon witnesses and take testimony if deemed necessary.

An advisory committee of not more than ten members is to be appointed by Governor Okey L. Patteson to consult and advise with the interim committee. The advisory committee will include as ex officio members the president of West Virginia University, the president of the West Virginia State Medical Association, the president of the West Virginia State Dental Society, and the president of the West Virginia State Nurses Association.

NEW TB BILL EFFECTIVE JULY 1

Elimination of the "means test" or maintenance charge at all state tuberculosis sanatoria is provided for under the provisions of S. 62, which passed both houses of the legislature without opposition, and which was signed by the Governor on February 17.

The bill is effective July 1, 1949. After that date there will be no charge assessed against patients admitted to any of the state TB hospitals. The overall operating expenses will be borne by the state itself. Heretofore a charge of $1.00 per day has been made for all patients. This fee was paid by the patient himself or by the state from a fund administered by the state health department. All case finding work has been under the supervision of the DPA.

OVER 500 MEMBERS PAY ASSESSMENT

More than one-third (511) of the members of the West Virginia State Medical Association have paid the American Medical Association's special assessment, according to a report compiled by the State Medical Association as of March 15. Just under one-third (468) have paid the state voluntary contribution. These figures do not include checks sent directly by members to the American Medical Association, in Chicago.

One county, Mercer, has reported a one hundred per cent payment by members of both the A. M. A. assessment and the state voluntary contribution. Several other societies were near the top as of March 15.

CONVENTION PROGRAM TAKING SHAPE

The scientific work committee of the West Virginia State Medical Association is still hard at work preparing the program for the 82nd annual meeting at White Sulphur Springs, August 4-6, 1949.

While the program is beginning to take definite shape, no part of it will be ready for release before the first of May.

It is known at this time that general sessions will be held only in the mornings. All meetings of sections and affiliated societies and associations will be scheduled for afternoons.

For the first time in many years the annual meeting will start on Thursday instead of Monday. Those who plan to attend may make reservations over Sunday. The Greenbrier management will accept room reservations beginning on May 1, and it is now indicated that rooms will probably be available for all doctors and their wives who plan to attend the meeting.

In order to provide much needed time for the presentation of scientific papers, the opening exercises will be dispensed with this year. It is planned to have the first paper presented on Thursday morning, August 4, at ten o'clock. The annual banquet will be held Saturday evening, August 6.

MERCER FIRST OVER TOP

Mercer is the first component society to report a one hundred percent payment by members of annual dues, the American Medical Association special assessment, and the state voluntary contribution. The goal was reached by this component medical society on February 26.

Dr. Frank J. Holroyd, of Princeton, is secretary-treasurer of the society, and his report of full payment by members was received at the state headquarters offices on the eve of the first medical public relations conference. Doctor Holroyd is chairman of the Public Relations committee, which is in charge of all PR activities in connection with the educational campaign now under way by the American Medical Association and the West Virginia State Medical Association.

Eastern Panhandle was the second society to go over the top in the payment of dues. A report of payment by all members was filed at the headquarters offices on March 10 by Dr. G. O. Martin, the secretary.

CANCER SOCIETY MEETS

As this issue of The Journal is on the press (March 25), the annual meeting of the board of directors of the West Virginia Cancer Society is being held in the Daniel Boone Hotel, in Charleston. This meeting will be followed by a meeting of the state executive committee, and the annual banquet is being held that night. District commanders, county captains, directors of centers, campaign chairmen, and other interested persons are attending the meeting.

SOUTHEASTERN SURGICAL CONGRESS

The annual meeting of the Southeastern Surgical Congress will be held May 23-26, at Biloxi, Mississippi. Dr. R. J. Wilkinson, of Huntington, is the president.

RHEUMATIC FEVER DIAGNOSTIC CLINIC OPENED AT FAIRMONT HEALTH CENTER

West Virginia's first rheumatic fever diagnostic clinic was opened at the health center in Fairmont on March 10. The new clinic was made possible by close cooperation between the Marion County Medical Society and the county health department. It is estimated that the expenses for operating the clinic will be between $15,000 and $20,000 per year.

The Marion County Medical Society will designate members who will be in charge of the clinic for a two-month period throughout the year. The schedule for professional supervision has been completed for the remainder of the year.

Overall administration will be in charge of Dr. C. L. Holland and Dr. O. L. Haynes, pediatricians, and Dr. A. Glenn Evans, county health officer. Drs. John P. Helmick, J. J. Jenkins, Jr., R. H. Jones, and L. Rush Lambert have been named consultants.

Patients will be accepted only on referral from the family physician. Arrangements have been made with Fairmont General Hospital for the care of children who are found to need hospitalization. Clinical services will include physical examination, fluoroscopy of the chest, chest X-ray, urinalysis, blood count, an electrocardiogram, and a blood sedimentation test. A complete diagnosis, with recommendations, will be sent to the family physician.

West Virginia is the 26th state to establish a diagnostic rheumatic fever clinic.

BRANCH PH OFFICE AT EAST RAINELLE

A branch office of public health district No. 2 was opened at East Rainelle, in Greenbrier county, early in March, with the full support of the Rotary Club and the Moose Club. The quarters which are located on the second floor of the Moose Club will be in charge of Mrs. Halley Mae Thompson, R. N.

According to Dr. N. H. Dyer, state health commissioner, most of Mrs. Thompson's time will be spent in the field and will include home visits and visits to schools. The office will be open to the public on each Friday afternoon and on the mornings of the second and fourth Saturday.

Plans are being made to schedule child health conferences, food handler's schools, and provide other health services in space provided by the Veterans of Foreign Wars in its new building at Rupert, also in Greenbrier county.

DR. RUSSEL KESSEL HEADS NEW COMMITTEE

The Council of the West Virginia State Medical Association has authorized Dr. Thomas G. Reed, the president, to appoint a committee on emergency medical service to consult with the AMA Council on National Emergency Medical Service and conduct programs concerning national security sponsored by the Council through its local agencies.

Dr. Russel Kessel, of Charleston, has been named chairman of the committee, and the other members are Dr. L. Rush Lambert, of Fairmont, and Dr. Ward Wylie, of Mullens.

STATE CAMPAIGN AGAINST SOCIALIZED MEDICINE OPENED AT PR CONFERENCE

Over fifty members of the State Medical Association and Auxiliary attended the first medical public relations conference, which was held at the Daniel Boone Hotel in Charleston, February 27. The conference was sponsored by the public relations committee of the West Virginia State Medical Association.

The program for the state educational campaign was presented by Dr. Frank J. Holroyd, chairman of the committee, who presided at the meeting. It was agreed that called meetings are to be held by component societies on March 29, 1949, for the purpose of considering and acting upon a resolution pledging continued individual and collective efforts to protect and improve the health of the people of this state, and opposing any form of socialized medicine. In the resolution, the societies would also pledge their members to endeavor to extend low cost voluntary health insurance and provide rural emergency clinical and ambulance facilities.

Dr. John T. T. Hundley, of Lynchburg, Virginia, was the guest speaker at the luncheon. His subject was "The Individual Physician's Duties in Medical Public Relations." The speaker discussed an individual campaign he conducted among the citizens of his home community for the purpose of ascertaining their views concerning doctors and the medical profession.

A mimeographed copy of Doctor Hundley's address has been mailed by the public relations committee to each member of the State Medical Association.

ANESTHESIOLOGISTS SCHEDULE MEETING

A joint meeting of the American Society of Anesthesiologists and the Southeastern Section of the A.S.A. will be held April 7-9 at the Statler Hotel, in Washington, D. C. Scientific programs are planned for the three days of the meeting, and all luncheons and dinners will be held at the headquarters hotel.

Dr. John F. Morris, of Huntington, is on the program for the opening day. He will present a paper at 11:00 A. M. on the topic, "The Effects of Anesthesia on the Urinary Bladder."

Hotel reservations may be made by writing to the Statler Hotel, and full information concerning the program may be obtained from Dr. L. S. Mousel, local chairman, George Washington University Hospital, 901 23rd St. N. W., Washington 7, D. C.

NEW SUPERINTENDENT AT PINECREST

Dr. Hugh S. Edwards, of Beckley, has been appointed by Governor Okey L. Patteson as superintendent of Pinecrest Sanitarium, in that city. He has been serving as acting superintendent in the place of Dr. G. E. Gwinn, who resigned several months ago.

PHC MEETS AT CHARLESTON

The spring meeting of the public health council will be held April 7-9, 1949, at the Daniel Boone Hotel, in Charleston, for the purpose of examining applicants for licensure in West Virginia.

WHAT IS SOCIALIZED MEDICINE?

The following definitions of socialized medicine and state medicine, and voluntary and compulsory sickness insurance were submitted by the Council on Medical Service and approved by the House of Delegates of the American Medical Association at the interim session, held December 1, 1948, in St. Louis:

Socialized Medicine

Socialized medicine is a system of medical administration by which the government promises or attempts to provide for the medical needs of the entire population or a large part thereof.

State Medicine

State medicine is a form of socialized medicine in which the government attempts to provide medical services directly to the general population from funds established by taxation. The physicians become employees of the state and medical practice becomes subject to the directives of the third party.

Compulsory Sickness Insurance

Compulsory sickness insurance is a system of sickness insurance in which all members of a given group of persons in a given governmental area are compelled by law to contribute to and be enrolled in the scheme. Any compulsory sickness insurance program under direct control of the state is socialized medicine, insurance principles no longer prevail, and the compulsory contributions become a special tax.

Voluntary Sickness Insurance

Voluntary sickness insurance or prepayment insurance is that system whereby individual costs are spread over a period of time by a group of people who voluntarily band together to protect themselves against the economic burden of sickness. It involves the insurance principle and an organized system of payment.

A. M. A. AUXILIARY AT ATLANTIC CITY

The 26th annual meeting of the Woman's Auxiliary to the American Medical Association will be held conjointly with the AMA, June 6-10, in Atlantic City. Headquarters will be established at Haddon Hall.

Reservations for rooms should be made immediately by addressing Dr. Robert A. Bradley, Chairman, Subcommittee on Hotels, 16 Central Pier, Atlantic City, New Jersey. Choice of hotel should be stated in application for reservation.

Further information concerning the program may be obtained from Mrs. James H. Mason, General Chairman, 5501 Atlantic Avenue, Ventnor City, N. J.

"FOUNDATION PRIZE"

The South Atlantic Association of Obstetricians and Gynecologists has announced the establishment of "The Foundation Prize." Authors of papers on obstetrical and gynecological subjects desiring to compete for the prize may obtain full information from E. D. Colvin, M. D., Secretary 1259 Clifton Road, N. E., Atlanta, Georgia.

DOCTORS AND DENTISTS?

According to information compiled by the West Virginia State Medical Association for legislative committees, there were more than 800 pre-medical students enrolled in West Virginia schools as of February 11. An even 250 students were taking pre-dental work as of that date.

All state colleges are represented in the report except Glenville State College from which no information was received.

The following list shows the number of students by schools, enrolled in pre-medical and pre-dental work in this state:

School	*Pre-Medical*	*Pre-Dental*
Alderson-Broaddus	3	0
Beckley	21	12
Bethany	80	5
Concord	15	11
Davis and Elkins	47	8
Fairmont State	10	16
Marshall	130	90
Morris Harvey	24	4
Potomac State	30	14
Salem College	8	7
Shepherd	7	5
West Virginia Institute of Technology	10	0
West Liberty State	7	10
West Virginia University	386	61
West Virginia Wesleyan	28	7
Totals	806	250

SOCIAL CONSULTANT NAMED

Miss Isabel Dorothy Taylor, a native of Pittsburgh, has been named by Dr. N. H. Dyer, state health commissioner, as social consultant to the division of maternal and child health of the state health department.

Before coming to West Virginia, Miss Taylor, who is a graduate of the University of Chicago School of Social Work, was engaged in poliomyelitis follow-up work in connection with a private hospital in North Carolina. Prior to that, she served as supervisor of physical restoration for the Oregon state division of vocational rehabilitation.

Miss Taylor will assist the director of the division in three special programs, the premature center in South Charleston, the Children's diagnostic center in Kanawha County, and the proposed rheumatic fever diagnostic clinic in Marion County. She will serve as liaison between the patients and the doctors, as well as with cooperating agencies.

A. C. C. P. EXAMINATIONS

The next oral and written examinations for fellowship in the American College of Chest Physicians will be held at Atlantic City June 2, 1949. Candidates for fellowship in the College who would like to take the examinations should contact Dr. Murray Kornfeld, Executive Secretary, American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Illinois.

STATE SECTION OF SOUTHEASTERN SURGICAL CONGRESS IN SESSION

The second annual meeting of the West Virginia Section of the Southeastern Surgical Congress will be held April 1-2, at the Daniel Boone Hotel, in Charleston.

The program for the first day will include operative clinics at all Charleston hospitals. A luncheon at noon is to be followed by a session in the afternoon with the Association of Pathologists of West Virginia, of which Dr. W. J. G. Putschar, of Charleston, is president. Papers will be presented by Drs. V. L. Peterson, A. B. Curry Ellison, and Hugh A. Bailey, of Charleston.

The following doctors will appear on the program on April 2: Drs. Charles F. Fisher, Clarksburg; T. Kerr Laird, Montgomery; A. A. Wilson, Charleston; R. J. Wilkinson, Huntington; Maynard Pride, Morgantown; Charles D. Hershey, Wheeling; Robert C. Bock, Charleston; and M. L. Hobbs, Morgantown.

Dr. R. J. Wilkinson, of Huntington, is president-elect of the Southeastern Surgical Congress, and the executive committee of the West Virginia section is composed of Dr. R. K. Buford, Charleston, chairman; and Drs. James S. Klumpp, Huntington; Claude B. Smith, Charleston; Frank Barker, Huntington; Thomas Kerr Laird, Montgomery; E. L. Gage, Bluefield; Bert Bradford, Jr., Charleston; Francis C. Coffey, Huntington; and Charles D. Hershey, Wheeling.

Mr. R. J. Wilkinson, Jr., of Huntington, is secretary of the section.

Dr. Russel Kessel, of Charleston, is chairman of the program committee, and the other members are Drs. Thomas G. Reed and A. A. Wilson, of Charleston.

NEW BOARD APPROVED

The recently organized American Board of Preventive Medicine and Public Health has been approved by the Advisory Board for Medical Specialties and by the AMA Council on Medical Education and Hospitals. Applications are now being received for examination for certification in this specialty.

The requirements for certification include general qualifications, such as moral and ethical standing in the profession, adequate training in medicine and internship in an approved hospital, and licensure to practice medicine in the United States. The applicant must have had training and experience in preventive medicine and public health for at least six years following internship. This must include special academic training or its equivalent, and field training or residency meeting the standards set up by the board.

The by-laws authorize a founder's group made up of practitioners of preventive medicine and public health who have attained unquestioned eminence in the field. Applicants for the founder's group may be excused from examination.

Full information concerning this new board may be obtained from Dr. Ernest L. Stebbins, Secretary, 615 N. Wolfe Street, Baltimore 5, Maryland.

RAILWAY SURGEONS TO MEET

The 61st annual meeting of the American Association of Railway Surgeons will be held at the Drake Hotel, in Chicago, June 30-July 2, 1949.

The morning sessions will include papers on various medical and surgical subjects, while the afternoon sessions will be devoted to symposia on "Lesions of the Bones and Joints" and "Intrathoracic Disorders."

Full information concerning the meeting may be obtained by writing to Chester C. Guy, M. D., Secretary, 5800 Stony Island Avenue, Chicago 37, Illinois.

SOUTHEASTERN SURGICAL CONGRESS

The seventeenth annual assembly of the Southeastern Surgical Congress will be held at the Buena Vista Hotel, in Biloxi, Mississippi, May 23-26.

A comprehensive program has been arranged for the meeting, and over forty papers will be presented by prominent surgeons from over the country. Full information concerning the meeting may be obtained by writing to Dr. B. T. Beasley, Secretary, 701 Hurt Building, Atlanta, Georgia.

WESTON SUPERINTENDENT RESIGNS

Dr. Joseph L. Knapp, superintendent of Weston State Hospital, has tendered his resignation, effective April 20, when he will become associated with Dr. Arthur J. Schwenkenberg, prominent psychiatrist, in the operation of Beverly Hills sanitarium (private mental) hospital) at Dallas, Texas.

Doctor Knapp took over his duties as superintendent at the Weston hospital in June, 1946, after over five years' service in the Army Medical Corps. Many important and much needed improvements have been made since he has been at Weston. The legislature just recently appropriated funds asked by him for further improvements during the next biennium.

GOVERNOR FILLS HOPEMONT VACANCY

Dr. A. L. Starkey, of Hopemont, has been named by Governor Okey L. Patteson as superintendent of Hopemont Sanitarium to succeed Dr. David Salkin, who resigned effective November 1, 1948. Doctor Starkey has been serving as acting superintendent since Doctor Salkin left for the west coast early in November.

RELOCATIONS

Dr. J. E. Mangus, of Pineville, who has been in the Army Medical Corps since 1943, has been released from service and has located for the practice of his profession at Wyethville, Virginia.

* * * *

Dr. William J. Steger, of Hopemont, has moved to Wheeling where he will continue the practice of his specialty of internal medicine, with offices at 707 Riley Law Building.

* * * *

Dr. Merrill R. Fox, of Charles Town, has accepted appointment as chief of professional services at the Veterans Administration Center at Kecoughton, Virginia.

PREMATURE NURSERY ANNIVERSARY

During the first year of operation of the premature nursery, set up in Kanawha County as a demonstration project by the state department of health, a total of 123 premature infants were given care. The nursery, which was opened February 16, 1948, is located at the Thomas Memorial Hospital in South Charleston.

According to Dr. N. H. Dyer, state health commissioner, eighty-one or 66% of the infants survived. This compares favorably with the other premature centers throughout the nation. Thirteen sets of twins and one set of triplets were included in the total number receiving care.

In an effort to determine accurately the relationship between malnutrition and premature birth, a dietary study of mothers of premature infants has been instituted by the chief nutritionist of the division of maternal and child health. This study is paterned after Harvard's Burke-Stewart research.

The professional staff of the nursery includes the following pediatricians practicing in Kanawha County: Drs. Henrietta Marquis, A. A. Shawkey, Helen M. Belknap, Lloyd Cox, Harry Baldock, Jack Basman and Mary V. Gallagher.

CHICAGO MEDICAL GRADUATES ELIGIBLE

During the closing days of the regular session of the Legislature, a bill was passed providing for the examination and licensing of doctors graduating from schools not approved by the Council on Medical Education and Hospitals as "Class A" schools, providing such doctors have graduated during the period from January 1, 1944, to December 31, 1948. Applicants for such licensure must be bona-fide citizens of West Virginia.

Probably the only school affected is Chicago Medical School, which was approved as a "Class A" school late in 1948. It is thought that not over five graduates of this school will be eligible to take the examination provided by the public health council.

The bill had been unanimously approved by the Council of the West Virginia State Medical Association.

"SYRUP OF URETHANE" WARNING

Early in March, Dr. N. H. Dyer, State Health Commissioner, broadcast a warning to physicians and pharmacists in West Virginia concerning the use of "Syrup of Urethane," a cough syrup manufactured by Marvin R. Thompson, Inc., Stamford, Connecticut.

The warning against prescribing or selling the product is the subject of a circular issued by the Food and Drug Administration and distributed to all state medical associations, in which it is pointed out that the use of this cough syrup might cause a dangerous lowering of the white blood cell count if taken in the quantity shown on the label.

Doctors are requested to return any of the product in their possession to the druggist from whom it was purchased, who, in turn, will send it back to the manufacturer.

THE WEST VIRGINIA MEDICAL JOURNAL

302 ATLAS BUILDING, CHARLESTON, W. VA.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Editor
WALTER E. VEST, M. D.
955 Fourth Ave.
Huntington, W. Va.

Managing Editor and
Business Manager
MR. CHARLES LIVELY
Box 1031
Charleston 24, W. Va.

Associate Editors:
EDWARD J. VAN LIERE, M. D.
Morgantown, W. Va.
W. M. SHEPPE, M. D.
Wheeling, W. Va.
G. G. IRWIN, M. D.
Charleston, W. Va.
R. H. EDWARDS, M. D.
Welch, W. Va.

JAMES R. BLOSS, M. D., Editor Emeritus, Huntington

Vol. XLV MAY, 1949 No. 5

CURARE IN ANESTHESIA*

By

JOHN F. MORRIS, M. D.,
Huntington, W. Va.

Curare has been known since the 16th Century[1] but has become useful in anesthesia only during the past six years. Gill[2] was first to introduce a clinically adequate variety of the drug. Prior to this, investigators were unable to duplicate the experiments of others due to the variations in potency and toxicity of the samples. According to Gill,[2] curare is a "complex of botanical ingredients" found in the north and west of South America.

Watterson and Brodie, in 1815, demonstrated that curare poisoning caused death by asphyxia.

Hoffman,[3] in 1879, used curare in an unsuccessful attempt to control convulsions in tetanus. Bennett, in 1940, used curare to lessen the severity of convulsions in shock therapy. Griffith and Johnson reported its use in anesthesia in 1942, and Cullen reported a large series of cases in which curare was used.

The mode of action of curare[3] is the interruption of nerve impulses at the myoneural junction. The action is peripheral so that the muscle will respond neither to injected acetylcholine nor to stimulation of its nerve. Prostigmine inhibits the curare effect by inhibiting the cholinesterase.

Curare is partly destroyed by the liver and the remainder is eliminated by the kidneys. It does not pass the placental barrier.[4]

Curare is not an anesthetic agent,[5] but is used in anesthesia to produce muscular relaxation and to reduce the amount of anesthetic agent necessary. The conscious patient receiving curare experiences weakness of the eyelids, diplopia, weakness of the jaw and throat muscles, and weakness of the extremities. Finally the respiratory muscles are affected, with the diaphragm being involved last.

Curare may be injected intravenously or subcutaneously. The intravenous route is preferable since overdosage or inadequate dosage can be determined in five to ten minutes. Oral administration is without effect unless there is a break in the mucous membrane.

The dosage of curare varies with the anesthetic agent used, the patient, the anesthesiologist and the demands of the surgeon. For adults, the average dose is 9 to 12 mg. of d-tubocurarine intravenously, varying downward to 0.075 mg. per pound of body weight in children.** If ether is used, the dosage is halved. Supplemental doses may be injected in three to five minutes.[7]

There are several anesthetic agents with which curare may be used. The combination most widely used is curare, pentothal and nitrous oxide-oxygen. This method provides a smooth, pleasant induction, prompt and adequate relaxation in nearly every instance, and emergence without nausea and emesis. Many anesthesiologists are using a mixture of 19 cc. of 2.5 per cent pentothal and 1 cc. of d-tubocurarine.[6] However, it is doubtful that this is superior to the

*Presented before a Staff Meeting at the Chesapeake & Ohio Hospital, Huntington, West Virginia, Sept. 15, 1948.

**0.15 mg. of d-tubocurarine is equivalent to one unit of partially purified curare solutions.

intermittent administration of either pentothal or curare as needed.

When curare is used with cyclopropane, adequate relaxation is obtained with a lighter plane of anesthesia. This will, in turn, shorten the recovery time. When it is used with ether, the amount of curare necessary is approximately one-half as compared to other agents.

The relaxation obtained with curare may be helpful in many procedures other than surgery. Bronchoscopy, esophagoscopy, tracheal intubation, laryngoscopy and painful manipulations are facilitated by using this drug. It may be used also in controlling convulsions of tetanus and ether and the muscle spasms of poliomyelitis.

With a drug so potent, it is logical to expect complications. However, the complications need not be serious if treated properly. Respiratory depression is treated by reenforcing respiration, preferably after inserting a tracheal tube. If respiration is not adequate at the termination of the surgical procedure, prostigmine may be given intravenously. Burke and Linegar[8] believe that 3 to 5 cc. of 1:2000 prostigmine is necessary. Occasionally, hiccoughs will develop. This condition is alleviated by deepening the level of anesthesia temporarily or switching to another agent. Although curare does exhibit certain histamine-like properties, laryngospasm and bronchospasm are rare.[6]

The contraindications to the use of curare are myasthenia gravis and inability of the anesthetist to perform artificial respiration.

SUMMARY

Curare, acting at the myoneural junction, produces muscular relaxation. It is not a completely harmless drug. Those using curare should be familiar with its contraindications and with the treatment of its complications.

BIBLIOGRAPHY

1. Goodman, Louis, & Gilman, Alfred: The Pharmacological Basis of Therapeutics, New York, Macmillan Co. 1941, p. 495.
2. Gill, Richard C.: Curare: Misconceptions Regarding the Discovery and Development of the Present Form of the Drug, Anesthesiology 7:14-23 (Jan.) 1946.
3. Cole, Frank: The Use of Curare in Anesthesia, Anesthesiology 6: 48-55 (Jan.) 1945.
4. Harroun, Phyllis. Becker, F. E. & Fisher, Carl W.: The Physiologic Effects of Curare and its use as an Adjunct to Anesthesia, Surg., Gynec. & Obst. 84: 491-498 (April) 1947.
5. Smith, Scott M., Brown, Hugh O., & Toman, J. E. P.: The Lack of Cerebral Effects of d-Tubocurarine, Anesthesiology 8:1-13 (Jan.) 1947.
6. Baird, Joe W.: Pentothal—Curare Mixture, Anesthesiology 8: 17 (Jan.) 1947.
7. Smith, Scott, M.: The Use of Curare in Infants and Children; Anesthesiology 8:176—179 (March) 1947.
8. Burke, J. C. & Linegar, C. R.: Eserine and Neostigmine Antagonism to d-Tubocurarine, Anesthesiology 9: 251-257 (May) 1948.
9. Dripps, Robert D., & Sergent, Warren F.: The use of a New Curarizing Agent, Dinhydro-Beta-Erythroidine, For The Production of Relaxation During Anesthesia and Surgery, Anesthesiology 8: 241-251, (May) 1947.

THE WELFARE OF THE HOUSEWIFE

The effects of fatigue in the housewife exceed those of fatigue in any other type of worker. They are reflected not only in the woman and her work but also throughout her home and family.

It is obvious that the housewife largely determines the atmosphere in her home. Once she is tired, discontented, or frustrated she ceases to enjoy her vocation, and in one way or another she becomes inefficient. As a result it may happen that the husband no longer spends much time at home, and the children often become unmanageable, suffering from the lack of a secure background when it is most needed.

It is recognized that no one can do well if he is not happy in his work, and equally that contentment and efficiency at work can be spoilt by mental preoccupation. This was well seen during the late war, when efficiency was impaired by boredom and anxiety rather than by danger or physical hardship.

The vocation of housewife calls for the most natural, as well as for the greatest, of human qualities. A woman can find contentment in her work only if she can approach it with an unpreoccupied mind. Even at this time a good housewife can take her work in her stride if she is trained to her task and happy in its performance. This also implies that she is happy in her marriage, and that all her preoccupations are pleasant ones. The ideal housewife described in the last chapter of "Proverbs" can still be found today.

The need for amelioration in the conditions of the work and environment of the housewife is widely recognised. Of equal importance is the need for every woman—and man—to be equipped by early training and education for the assumption of responsibility in every shape and form as a natural privilege without question or resentment.—Stella Instone, M. D., in The Lanset.

CANCER OF THE LUNG

Cancer of the lung should carry the highest rates of cure of any type of internal cancer because the time schedule of discovery can be set ahead to antedate symptoms. The responsibility is threefold: support by the laity of mass screening of the adult population on an annual basis; proper sorting of areas of silent abnormal densities by the medical profession generally; and reliance on exploratory thoracotomy in suspected cases.—New England J. Med.

PEDIATRIC ALLERGY

The more allergic the parents, the earlier allergy develops in the infant. If both parents are allergic, practically all children will be affected with allergic disorders, while if one parent is allergic, every other child is usually affected.—W. Ambrose McGee, M. D., in Wisconsin Med. J.

THE USE OF BASE-IN PRISMS IN THE TREATMENT OF SCHOOL MYOPIA*

By

OSCAR B. NUGENT, M. D., F.A.C.S., F.I.C.S.,**
Chicago, Illinois

Myopia is an error of refraction in which the rays of light are brought to a focus before they arrive at the fovia centralis. The optical system is too strong in comparison to the length of the eyeball and/or the eyeball is too long as compared to the strength of the optical system. The author believes that two types of myopia exist: (1) The congenital type, that is, an eye that has a normal sclerotic but is too long for its optical system. Such an eye is stationary and the myopia remains the same throughout life. (2) The acquired type which has a tendency to advance in various degrees. The so-called school myopia and progressive myopia belong to this group.

It cannot be said that the etiology of myopia is established, because many different theories concerning its origin are presented in the literature, most of which doubtless only contribute to its advancement and none of which is the underlying cause.

Much attention is given in the literature to accommodation and/or convergence as a possible outstanding cause in the production of myopia but it is quite obvious that neither can be considered the real cause as all normal individuals converge and accommodate upon looking at near objects. Yet only a very small percentage of people have myopia. Hirsch found 123 cases of myopia in 1860 school children, or about 6.6 per cent. Parsons[2] gives the percentage as from 10 to 15 per cent. Many authors mention the possibility of a weakened, diseased or underdeveloped sclerotic due to an inherent, congenital or hereditary condition as being the real or underlying cause of myopia.

The author believes that a week sclerotic regardless of its origin is the real or underlying condition which lends to the formation of acquired myopia and that the so-called strains, stresses, pressures and drags due to muscular action are secondary causes but nevertheless play a most important role in the production and advancement of myopia.

The following data were obtained from a resume of the literature taken from the Ophthalmic Year Book, 1926, published by the Ophthalmic Publishing Co., of Chicago.

It has been said that a wide pupillary distance frequently found in myopic patients is a contributing cause but Clarke[3], in a paper on the genesis of myopia, disagrees with this concept and states that in 1,108 myopic patients the average pupillary distance was 60.8 mm. and that in 257 hyperopic patients the average pupillary distance was 60.9 mm. He believes that there is an hereditary condition affecting the sclerotic and because of this, myopia develops or is made to increase by excessive convergence over accommodation.

McCoy[4] states that there is an inherent degeneration of the sclera and that all other so-called causes are only secondary. Essed[5] thinks that myopia is caused by traction and that the internal rectus pulling on the nasal half of the globe produces a stretching action on the sclerotic. He believes also that traction on the optic nerve due to extreme convergence produces the pathologic change in it.

Wick[6] believes that traction has nothing to do with the formation of myopia but that there is a predisposition to myopia. Muller[7] thinks that traction of the inferior oblique produces myopia. Cholina[8] believes it is hereditary. Hirsh[9] thinks it is related to tuberculosis. Fracassi[10] states that the cause is lues, and Holm[11] believes it is due to the act of accommodation in near work during the period of active growth in persons predisposed by hereditary conditions. One author (Dufour) thinks it is due to poor light while another (Valando) states it is due to too much illumination.

Some ophthalmologists believe that the act of accommodation is a contributing cause and helps to advance the condition. They therefore use bifocal lenses to suspend the accommodation during close work.

The association between accommodation and convergence is present to a very strong degree in normal healthy individuals and the fact that one has a very marked influence upon the other is seldom disputed.

In the formative stage of axial myopia, the act of convergence precedes that of accommodation and is, therefore, doubtless the controlling factor in their associated action.

To illustrate: Let us assume a hypothetical patient with a myopia of minus 3 diopters. His far point, then, is about 13 inches away. With such an error of refraction present, the patient, in order to see an object 13 inches away, would

*Presented before the annual meeting of the West Virginia Academy of Ophthalmology and Otolaryngology, at White Sulphur Springs, September 21, 1948.

**From the Ophthalmic Department of the Chicago Eye, Ear, Nose and Throat Hospital, Chicago, Ill.

have to converge to bring the visual axis together at 13 inches but inasmuch as 13 inches is the patient's far point, he should not use his accommodation if clear vision is to be had at this distance.

Assuming that the act of convergence has an influence in stimulating the act of accommodation, (the author is of that opinion) this hypothetical patient would have accommodated to a greater or lessor degree during his convergence to 13 inches; therefore, his vision would be blurred and the object would have to be brought nearer to the eyes to bring it into focus which would again require further convergence.

This induced accommodation (or accommodation myopia) adds to the axial myopia only to make the condition worse. The theory has been advanced by Donders that the overaction of the converging muscles and the counteraction of the abducting muscles produce an increased pressure on the globes which in turn produces a further elongation of the globe due to the already weakened sclera.

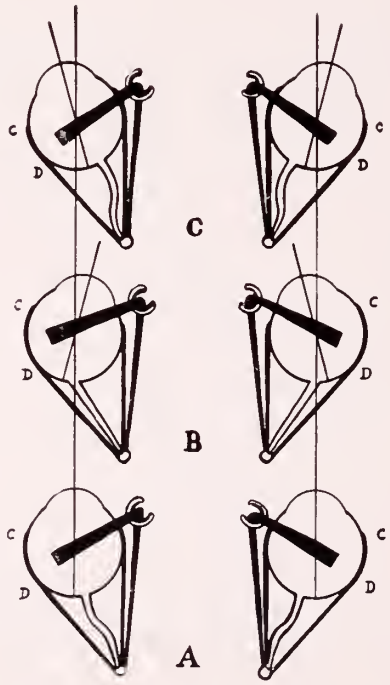


Fig. 1.
A represents the eyes in porollel fixotion. Note that the external rectus lies upon the sclero from point C to D which is known os the arc of contact. B represents the eyes in state of convergence. Arc of contact is greater than in C where the eyes are represented as being in a state of divergence. The tongentiol point D changes with the state of convergence and divergence.

It has been demonstrated by Hine[12] that the intra-ocular pressure will rise from 4 to 10 mm. Hg. during strong convergence.

In figure 1 it will be seen that the extrinsic muscles are in contact with the globe (arc of contact) in various degrees depending upon the position of the eye and during the convergence (B) the external rectus lies heavily upon the posterior hemisphere and during the position of divergence (C) the arc of contact of each muscle is more nearly alike and is confined more to the anterior half of the globe.

If, therefore, a patient has a weak sclerotic and the intraocular pressure is increased from 4 to 10 mm. Hg. during convergence, it would be natural to assume that the increased intraocular pressure would tend to elongate the eyeball and by the same reasoning one could assume the absence of the increased pressure when the external rectus is away from the globe as is the case in the state of divergence (C). The rationale of this fact has led to the use of base-in prisms in the treatment of myopia.

The use of base-in prisms is not original with the author but has been suggested in the literature for many years past. The author became interested in base-in prisms in the treatment of myopia nineteen years ago when, at the suggestion of the late Dr. P. A. Graves, of Chicago, we did considerable research and experimentation on this subject, the findings and conclusions of which were presented in a joint paper read before the ophthalmic section of the Illinois State Medical Society[18] and published in the Journal of the Illinois State Medical Society. Several case records were presented and considerbale discussion both pro and con was the result as is the usual case when myopia is being considered.

TREATMENT

Many forms of treatment have been suggested in the literature by various authors and perhaps each one has some merit. Gifford[13] says that bodily exercises, a wellbalanced diet containing the necessary amount of vitamins, and proper reading posture are necessary.

Wiener employed epinephrine in a strength 1:1000, making instillations several times a day over a long period of time. It is difficult to believe that this treatment could have any effect on the progress of myopia.

Pascal[14] states that there are cases of myopia in which nothing but the persistent wearing of prisms base-in will effectively and persistently lower the tonus of the ciliaries and show a reduction of myopia. The author has not found that prisms have much of a reducing effect on myopia. Maxey[15] stresses proper hygienic conditions in the home and school room.

Harding[16] thinks an abudance of porper food, exercise, fresh air, vitamins and calcium are necessary. Harman[17] recognizes the difficulty

in controlling the progress of even low degrees of myopia in some school children and thinks astigmatism is the foster-mother of myopia in susceptible children.

The author's method of treating axial myopia or the so-called school myopia is to measure the error of refraction under cycloplegic and if the patient is 10 years of age or under, the full correction is prescribed along with the correction of such astigmatism as may be present, plus base-in prisms. The strength of the prism prescribed in the first prescription is estimated by dividing the sum of the minus spheres required by two. The dividend thereof will indicate the total strength in prism diopters of the prism to be prescribed (half of which will be presicribed for each eye) Example: right eye minus 4.00 sphere, left eye minus 4.00 sphere, total 8, divided by 2 equal 4. Therefore, 4 prism base-in are prescribed.

This now reverses the relation between convergence and accommodation and instead of converging without accommodating, the patient must accommodate more in relation to his convergence. The visual axes are now diverging in relation to each other if single binocular vision is to be maintained.

The patient wears the minus lenses with prisms for six months at the end of which time he is refracted again and if no increase in the sphere is indicated, he will be refracted again in one year. If, however, the myopia has increased and stronger spheres are required, the strength of the base-in prisms is increased and in extreme cases bifocals are prescribed to decrease accommodation and lessen the stimulus to convergence.

In all cases, the general health of the patient is always under consideration and the attending physician is asked to add calcium to the treatment if any special treatment is indicated.

Following is a study of 212 cases of school myopia, 146 treated with base-in prisms and 66 treated without prisms.

An analysis of the 146 cases treated with base-in prisms:

Females 102 or 69.8%.
Males 44 or 30.2%.
Cases in which myopia did not increase: 120 or 81.5%.
Cases in which myopia increased with prisms: 25 or 18.5%.
Age at which treatment was begun from 4 to 18 years averages 15 years.
Length of time patient was under observation from 1 to 15 years averages 5 years.

An analysis of the 66 cases observed without prisms:

Females 55%.
Males 45%.
Cases in which myopia did not increase: 24.5%.
Cases in which myopia increased. 75.5%.
Cases in which myopia decreased: 6.%.

CONCLUSIONS

1. In view of the many various causes of myopia mentioned in the literature, the author has concluded that the underlying cause is a controversial subject. However, he is inclined to believe that a weakened sclerotic is the prime etiologic factor in acquired myopia.

2. It would appear that the so-called strains, stresses, pressures and drags due to muscle action, especially during convergence, are secondary etiologic factors.

3. The use of base-in prisms has not reduced the degree of myopia in any one case but apparently has stopped its advancement in quite a large percentage of cases.

4. Further study and research on the etiology and treatment of myopia are necessary.

BIBLIOGRAPHY

1. Hirsch, Monroe J.: Relation of Visual Acuity to Myopia, Arch. Ophth., Vol. 34, 1945, p. 418.
2. Parsons. Sir John Herbert: Text Book, Diseases of the Eye, ed. 7, New York, MacMillan Co., 1934, p. 497.
3. Clarke, E.: Genesis of Myopia, Ophth. Soc. United Kingdom, 1925, Vol. 45, p. 373.
4. McCoy, H. J.: High Myopia as Degenerative Process, J. Iowa State Med. Soc., 1925, Vol. 15, p. 597.
5. Essed, W.F.R.: Myopia and Physical Strain, Klin M. f. Augenh, 1926, Vol. 76, p. 441.
6. Wick, W.: Genesis of Myopia, Zeit. f. Augenh, 1925, Vol. 56, p. 356.
7. Muller: Pathogenesis and Treatment of Myopia, Abstract. Klin M. f. Augenh, 1926, Vol. 76, p. 722.
8. Cholina, A.: Hereditary Myopia, Russian Ophth. J., 1925, Vol. 4, p. 692.
9. Hirsh, G.: Tuberculosis and Myopia, Zeit f Tuberkulose, 1925, Vol. 44, p. 52, Abst. J.A.M.A. 86: 590, 1926.
10. Fracissi: Etiology and Pathogenesis of Myopia, Soc. Ital. de Oft., 1924, p. 114.
11. Holm, E.: Etiology of Myopia, Abst. J.A.M.A. 68: 1440, 1925.
12. Duke-Elder, Sir W. Stewart: Chapter XI: The intra-Ocular Pressure, Text Book of Ophth., St. Louis, C. V. Mosby Co., Vol. 1, p. 509.
13. Gifford, Sanford R.: A. Handbook of Ocular Therapeutics, Ed. 3. Revised Philadelphia, 1942, p. 396.
14. Pascal, Joseph S.: The Cause and Correction of Juvenile Myopia, Eye, Ear, Nose and Throat Monthly, Vol. 14-15, pp. 272-273, (Sept.) 1935.

15. Maxey, E. E.: Important Facts Concerning Myopia In Children, Northwest Med., New Series, Vol. 2, p. 366, (Dec.) 1910.

16. Harding, M. S.: Myopia and the School Child, J. Ind. State Med. Assoc. Vol. 39, p. 219, (May) 1946.

17. Harman, N. Bishop: The Control of School Myopia, Sight Saving Review, Vol. 4, p. 262, (Dec.) 1934.

18. Graves, P. A. & Nugent, O. B.: Use of Base-in Prisms in Treatment of Myopia, Ill. M. J., Vol. 66, p. 241, (Sept.) 1934.

DIHYDROSTREPTOMYCIN IN TB

Within less than a year after the isolation of streptomycin had been reported, its effectiveness upon certain forms of human tuberculosis was demonstrated. Thus, for the first time in the history of human tuberculosis, a drug was found which could be used in the treatment of tuberculosis by means of chemotherapeutic agents and which pointed to the possibility of finally eradicating the "white plague" of man.

Streptomycin has, however, certain important limitations, chief among which are (a) its neurotic potentialities, and (b) the development of resistance among the infectious organisms upon its prolonged administration.

Recent experiments seem to indicate that the toxic reactions can apparently be overcome, at least partly, by the use of dihydrostreptomycin, a reduced form of streptomycin. The problem of development of resistance remains, therefore, as the major limitation of this antibiotic, especially in the treatment of tuberculosis.—Selman A. Waksman and Hubert O. Lechvalier in Science.

BACTERIAL WARFARE

At one time the rules of war gave it some of the characteristics of an elaborate game played by civilised people. Perhaps it might have developed along these lines into an international sporting contest. But its actual development has been in the opposite direction, into a struggle where necessity knows less and less law.

Where defensive and offensive operations are no longer separated, and war is deliberately waged on nations rather than their armies, the chance of ruling out particularly horrible weapons or practices becomes very small. Apart from convention, the moral distinction between bullet and bacillus is by no means obvious: one may be more effective than the other, but their use seems equally justifiable or unjustifiable.

The fact remains that to many doctors bacterial warfare is particularly repugnant for two reasons: it enlists against a human enemy the micro-organisms which are the foes of all mankind, and it diverts to destructive purposes knowledge which the profession has laboriously acquired in the hope of making people, of all nations, healthier and happier.

We have reached a situation in which men of the highest character are prepared, from a sense of duty, to contemplate what they would normally regard as crimes of enormous magnitude. And this is precisely the state of mind we have so often condemned in our enemies.—The Lancet.

THE MANAGEMENT OF THE COMPOUND FRACTURE*

By
WAYNE BRONAUGH, M. D.,
Parkersburg, W. Va.

The problem of the compound fracture is ever increasing and it is most desirable that we review its method of management often and relate our ideas so that others may have the opportunity of giving thought to them.

Whether or not the healing of the fractured bone is the result of a metaplasia of fibrocartilaginous cells resulting in bone callus formation or the activity of osteoblastic cells of the endosteum and periosteum, it is the duty of the surgeon treating compound fractures to utilize all known basic surgical principles meticulously and carefully for, by so doing, he establishes the most favorable conditions for new bone formation and the ultimate healing of the fracture. Every compound fracture is an emergency and should be submitted to operation as soon as possible, since it is by early surgical treatment that the incidence of infection, delayed union and non-union is kept at a minimum.

The ultimate objective is to obtain a normally functioning limb with solid bony union and no deformity.

The management of the compound fracture should begin at the site of the accident by the judicious use of splinting and transportation. Wound inspection, judging the status of the patient and the treatment of shock are executed immediately upon admission to the emergency room and ward. Wound debridement, reduction of the fracture, application of fixation devices (if used) such as skeletal pins, bone plates, intramedullary pins, wire, nails, screws, bands and plaster casts are confined to the operating room. Restoration of function is obtained in days and weeks to follow principally by the patient's voluntary use of the limb and secondarily by the use of physical therapy.

It is highly desirable that persons entrusted with the transportation of fracture cases be familiar with methods of splinting which can be applied at the site of the accident. Ambulances should be equipped with some form of extension splints for upper and lower extremities and the attendants instructed in their use. Laymen, through newspapers and journals, should be instructed in the manner of handling a person with a fractured extremity during the process of transportation. If transportation of the fracture patient

*Presented before the Ambulatory Fracture Association, in Washington, D. C., October 4, 1948.

were executed properly, soft tissue damage often present upon admission to the emergency room would not be so severe. Trauma, because of detrimental movement at the fracture site, can sever a nerve, lacerate a blood vessel, or macerate muscle, connective tissue and skin, resulting in irreparable damage and even the loss of a limb or life.

Immediately upon admission to the emergency room, the general condition of the patient is evaluated. He is examined for head, spinal or chest injuries, damage to the viscera of the abdominal and thoracic cavities, loss of blood, and shock. The wound is carefully inspected, any foreign materials are gently removed, sulfathiazole powder is sprinkled in the wound and a sterile dressing is applied. If the condition of the patient permits, he is taken to surgery at once, otherwise, one or two hours (very rarely longer) are utilized in the preparation for operation. If it is not possible because of complicating injuries or other factors to submit the fracture to operation within a period of several hours to a day or so, then it is admissable to institute fixation of the fragments by application of skeletal pinning in the emergency room or ward. This is desirable in some fractures of the lower extremities but is rarely necessary in fractures of the upper extremities as fixation in such cases can be obtained by simpler methods. If skeletal fixation is employed, the extremity is prepared as for any operation and under local or low spinal anesthesia, the fixation units are applied. The extremity is gently brought into alignment and fixation bars attached. No attempt is made at reduction as this is done under direct vision in the operating room at the time of operation. By so fixing those fractures which have to wait for surgery, one of the principle causes of surgical shock is eliminated, namely, motion, which causes trauma and pain at the fracture site.

It should be kept in mind that for a short period following an injury a state of syncope may be present, the picture being one of hypotension, slow pulse, decreased respiratory rate and excursion, and marked pallor. Or immediately upon admission, the patient's condition may appear to be satisfactory and one-half to one hour later, the blood pressure may drop, the pulse become weak and thready, and definite shock ensue. This so-called delayed shock may manifest itself during the operative procedure dealing with a severe compound fracture. If syncope only is present, the condition soon will disappear and the patient will withstand a rather severe operative procedure without supportive therapy, but if there has been marked blood loss from extensive compound wounds, and chilling from undue exposure, shock may be present or may ensue within an hour or two. In all such cases heat, plasma, whole blood or glucose should be administered.

I do not believe any extensive debridement and operative correction of the severe compound fracture should be undertaken without transfusion of blood or plasma before or during the operative procedure.

Spinal anesthesia usually is preferred for fractures of the lower extremities and novocaine nerve block or pentothal for fractures of the upper extremities. Spinal anesthesia is never used for any operation without the continuous intravenous flow of glucose which is started immediately after the spinal injection and, if the patient is apprehensive, 7.5 to 15 grains of sodium pentothal is placed in the 1000 cc. of intravenous solution. Also, with spinal anesthesia, a respirator should be available in the event of a rarely encountered respiratory paralysis and, if pentothal is used, the laryngoscope and intratracheal tube for the not infrequent laryngeal spasm.

The open wound is well protected with a sterile lap sponge and the entire extremity is scrubbed with soap and water for five minutes, then the extremity is shaved, followed by another five minute scrubbing. Any dirt and blood clots are gently irrigated from the wound at this time. The extremity is painted with merthiolate and well draped. Complete debridement is started. All skin edges are excised back ⅛ to ¼ inch, all traumatized fascia, tendon and muscle are excised. Tendon repairs are made only if the injured tendon is cut clean and if the wound will be completely closed. Repair is made with steel wire sutures. It is bad practice to bury catgut, cotton or silk in these potentially infected wounds. The catgut always causes serum which is an incubation media for organisms and the cotton and silk will give rise, in some cases, to chronic sinuses until they are extruded or removed. I have never seen wire sutures cause trouble of any kind except in cases in which the wire ends or knots irritate the contacting skin. This never happens when subcutaneous tissue is adequate between the skin and suture or when the suture ends or knots have been properly turned under. If tendons are not primarily repaired, the ends are anchored with a single wire suture to prevent their retraction so that they can be found at a later date.

Important nerves, arteries and veins are protected. The major nerves in the field are explored if neurologic signs have aroused suspicion of their injury. If a nerve is partially cut through or torn, that segment is excised *in toto* and an anasto-

mosis is made with 36 or 38 gauge steel wire sutures. If conditions are not favorable for immediate nerve suture, the nerve ends are anchored so that they will not retract, and are marked with a piece of black cotton thread one or two inches long so that they can be easily identified when later repair is attempted.

In 90 per cent of cases of compound fractures, whether or not comminution is present, I maintain reduction by use of skeletal pinning and external fixation. Thus, this is the only method of fixation which will be discussed. After the wound is debrided, fixation pins are placed in the proximal and distal fragments. Under direct vision the fragments then are manually reduced and the fixation units locked by external fixation bars. If it has been previously decided that satisfactory reduction of the fracture cannot be accomplished without the use of the reduction machine, the following procedure is carried out: After the extremity is prepared for surgery and draped, "frac-sure" units or through and through pin fixations are applied. The extremity is then placed in the reduction machine and the compound wound re-draped. Moderate extension and fixation are applied and wound debridement is carried out. After this is accomplished, together with the necessary surgery which in the mind of the surgeon is essential for a good result, the fracture is reduced under direct vision by the reduction machine. It is at this stage that an effort is made to secure cancellous bone for the fracture site, provided excellent approximation of the major fragments cannot be obtained. Should the medullary canal be accessible, some of the endosteum and medullary substance is curretted from the medullary canal into the fracture site. One or two of the smaller loose bone fragments are rongeured into small pieces the size of wheat grains or small peas and placed in and about the fracture site. If there is loss of bone substance, that space is filled with bone chips prepared from bone fragments, or with cancellous bone taken from the ilium. The Haversian systems of these cancellous bone fragments are thickly lined with endosteal cells. As this work proceeds, the wound is continuously flushed with saline. In closing the wound no muscles are sutured and fascias are sutured only when they come together without tension and only when the suturing obliterates all dead space beneath the fascia. Before closure a small amount of sulfathiazole emulsion is placed throughout the crevices of the wound, and the suture material used is steel wire, if buried, with cotton for the skin. If there has been skin loss, an effort is made to secure a closure by counter incision and shifting of the skin edges. I prefer not to graft skin at the primary operation, leaving this for a later date. The reasons for not doing primary skin graft are, first, most compound fractures require rather large operative procedures done in most instances on sick patients, and I do not believe that the added time necessary for primary skin grafting is justified. Second, I feel that the necessary pressure for 8 to 10 days to assure take of the skin graft is detrimental to the fresh operative wound. If the wound cannot be closed the Orr technic is followed, the cast being applied over the fixation bars. In no case should primary suture of fascia or skin be done if the wound comes to surgery after eight to twelve hours or more. If this much time has elapsed before surgery, the chance for infection has increased to such an extent that the dangers are too great for primary closure. In such cases, complete debridement is carried out, reduction accomplished, and fixation bars applied, following which the Orr technic is instituted, the wound being impregnated with sulfathiazole emulsion, packed with thick vaseline, and a cast being applied over the dressings and splint, not to be removed for three to six weeks. In cases in which there has been loss of skin to the extent that granulating areas are obtained, the wound usually is ready for split grafts, taken with a Padgett Dermatone, in about two or three weeks. I have found it very advantageous to prepare the granulating surface for grafting by applying elastic adhesive (encircling the entire extremity) under moderate tension for a period of six or eight days previous to applying the graft. The adhesive is removed in the operating room at the time of application of the skin graft, and a field with flat, healthy granulations usually is obtained.

The principal procedures which are conducive to the healing of compound comminuted fractures are:

1. Good reduction and firm rigid fixation of the bone fragments until solid bony union has occurred. This is secured in most cases by the proper use of skeletal pinning and external fixation.

2. Establishment of bony continuity between the ends of the major fragments by filling any space, if present, with bone chips and cancellous bone secured from some of the smaller fragments of the fracture site or from the ilium. The bony fragments and cancellous bone furnish many endosteal cells, consistent with the theory of bone growth from differentiated bone-forming cells; also, they furnish a perfect skeletal framework upon which the undifferentiated fibrocartilaginous cells may undergo metaplasia into bone cells, together with sufficient calcium and phos-

phate, and bone extract to be utilized by the undifferentiated fibrocartilaginous cells in becoming differentiated into bone cells, thus doing no violence to this theory of bone formation.

3. Eradication of all present infection and the prevention of latent infection by proper wound debridement, proper wound irrigation, use of sulfathiazole emulsion in the wound, and preoperative and postoperative administration of penicillin.

4. Maintenance of proper muscle tone by gentle muscular activity as soon as feasible, avoidance of dressings with excessive tension, and the maintenance of the proper temperature in the extremity. By the avoidance of excessive physical, chemical and thermal stimuli to the injured tissues, nature will establish a PH toward the alkaline side (7.2 to 8) which is essential for the enzyme phosphatase to function and it may be through the action of this enzmye that the undifferentiated fibrous cell can utilize calcium and become differentiated into a bone-forming cell. If the physical, chemical or thermal stimuli at the injury site are excessive, then nature will establish a PH toward the acid site (5 to 6) which will prevent the activity of the enzyme phosphatase. This, in turn, prohibits the differentiation into bone cells of the undifferentiated fibrous cell which condition will lead to fibrous union or nonunion[1].

Should the PH of the wound rapidly return to normal (7.2 to 7.4), bone callus formation has been shown to be rapid and abundant.

In my series of compound and compound, comminuted fractures treated during the past ten years by the method described, there have been no cases complicated by osteomyelitis either at the fracture site or the pin holes, and there has been only one case of delayed union which went on to rapid healing after drilling of the fragments at the fracture site.

In one case, after three weeks, because of malplacement which caused the pins to become loose and to allow movement at the fracture site, it was necessary to remove the pin units and continue fixation of the fragments with a plaster cast. It has been the only case, in treating all types of fractures, in which it has been necessary to remove the pin units and substitute plaster fixation.

REFERENCE

1. Murry, C. R., Jr.: J. Bone & Joint Surg. 26: 437-442 (July) 1944.

The efficacy of streptomycin against tuberculous infections has proved that tuberculosis is yet another disease vulnerable to chemotherapeutic attack. Without undue optimism, greater triumphs may be anticipated.—Karl H. Pfuetze, M. D., and Marjorie M. Pyle, M. D., JAMA, March 5, 1949.

URETEROCELE WITH PROLAPSE THROUGH URETHRA

(A CASE REPORT)

By
A. JOHN OLIKER, M. D.*
Elkins, W. Va.

The purpose of this paper is to place on record a case of an interesting but apparently rare type of uropathy, namely, ureterocele with prolapse through the urethra.

An ureterocele usually is easily recognized cystoscopically as a cystic dilatation of the vesical end of the ureter. Two factors are necessary for its development[1]: (1) congenital stenosis or acquired stricture of the ureteral orifice and (2) a congenital weakness of the lower ureteral musculature. In its downward growth an ureterocele balloons forward into the bladder. It is covered externally by vesical mucosa, lined by ureteral mucosa, and the intervening fibers are composed of smooth muscle and connective tissue. Ureterocele is almost always accompanied by hydroureter and hydronephrosis; urinary infection and calculus formation are common sequelae. Enlargement of the ureterocele and relaxation of the supporting structures of the female urethra are probable factors predisposing to prolapse. The excretory pyelo-ureterogram of ureterocele (if renal function is adequate) is very characteristic: the non-opaque halo made by the wall of the ureterocele gives excellent contrast between the latter and the bladder; usually hydronephrosis and hydroureter also will be present.

Emmett and Logan,[2] in 1944, found more than 37 cases of ureterocele with prolapse through the urethra in the available literature (several articles were not obtainable); to this list they added a case of their own. Four additional cases have been reported.[3,4,5,6] More than one-third of the cases reported have been in girls under 15 years of age.

Prolapse of ureterocele through the urethra must be differentiated from urethral neoplasms and from prolapse of the urethra. The excretory pyelo-ureterogram and cystoscopy, together with the typical cystic appearance of the ureterocele, serve to establish the diagnosis. However, of most importance in making the diagnosis is the awareness that such an entity may exist.

CASE REPORT

A. P., a 26 year old colored housewife, was admitted to Memorial General Hospital March 18, 1948 because of a tumor which extruded from

*From the Department of Urology of the Golden Clinic and the Memorial General Hospital, Elkins, West Virginia.

her urethra almost every time she voided or strained. This tumor had first appeared eight weeks before and was accompanied by slight hematuria and mild dysuria. She had had no previous symptoms referable to the urinary tract except for mild stress incontinence during the past few years. She denied ever having chills or fever. She had given birth to eight children during the past nine years; this included one set of triplets and one set of twins. She had been seen

Fig. 1. Excretory urogram showing left ureterocele defined by nonopaque halo in bladder. Left hydronephrosis and hydroureter are present.

forty-eight hours after the initial appearance of the tumor. At that time, the protruding tissue was thought to be prolapse of redundant urethral mucosa; it did not look unlike a small prolapsed rectum. Furthermore, at cystoscopy it was believed that both ureteral orifices were visualized and that they appeared normal. There were many points of hemorrhage throughout the bladder mucosa. By gentle taxis the tumor was reduced through a rather lax urethra. During the following eight weeks the prolapse recurred with increasing frequency. On admission, it was recurring at almost every voiding or straining at stool. Usually, the mass would disappear into the bladder spontaneously but sometimes the patient would have to replace it manually. For three weeks prior to admission she had been having mild left flank pain, but otherwise felt well.

Physical examination was normal except for a dark red, cystic-looking tumor the size of a large plum extruding from the urethra. Moderate cystocele and rectocele also were present.

Urinalysis: pH 6; sp. gr. 1.020; albumen 2 plus; sugar negative. Microscopic: loaded with RBC. Hgb 75%; RBC 4,490,000; WBC 9,800; polymorphonuclear 67%; lymphocytes 30%; eosinophiles 3%. NPN 35. Hinton negative. X-ray of chest; no parenchymal or pleural pathology; cardiac silhouette normal.

Excretory urography on the day following admission showed left hydronephrosis and hydroureter with a well defined ureterocele as the cause of the urinary stasis (fig. 1). The ureterocele was demonstrated in its prolapsed position when the patient attempted to empty her bladder (fig. 2). The right urinary tract was within normal limits.

Fig. 2. Excretory urogram showing left ureterocele after prolapse through urethra. Left hydroureter is clearly outlined.

Cystoscopy also was performed on the day following admission. This was done with the ureterocele inside of the bladder and again after prolapse. Hemorrhagic cystitis was found. The right ureteral orifice appeared normal. On the left side of the trigone was a large, deeply injected, round mass which occupied most of the left half of the bladder. That which previously had been interpreted as the left ureteral orifice was now found to be a mucosal fold. Indigo carmine given intravenously appeared from the right ureteral orifice in two minutes in 4 plus concentration. None appeared from the left side. After

exerting gentle traction on the prolapsed cyst a small slit-like opening was found on its mesial surface; through this orifice a number 7 ureteral catheter was passed to the left renal pelvis. Its position was confirmed by x-ray and it was left *in situ* (fig. 3). Urine obtained from the catheter contained many red blood cells, apparently caused by trauma in passing the catheter.

On the following day, under spinal anesthesia, with moderate traction maintained on the prolapsed ureterocele and with the ureteral catheter

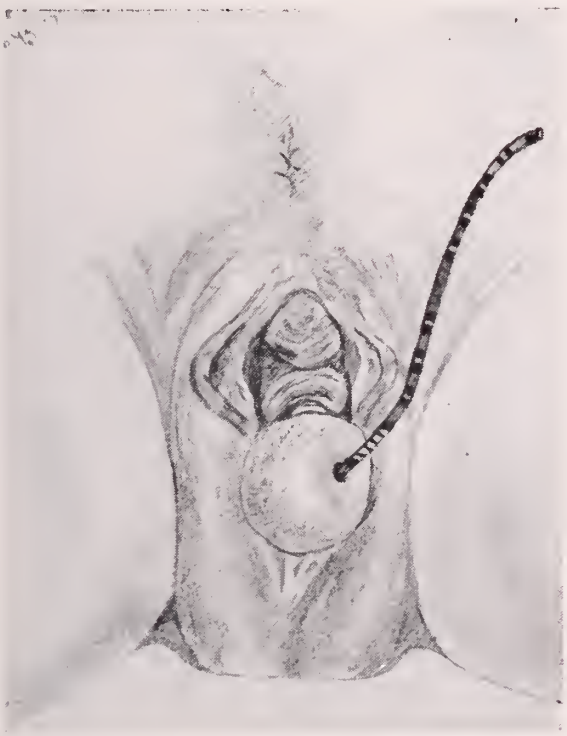


Fig. 3. Prolapse of ureterocele through urethra. Catheter has been passed to left renal pelvis.

still in place, most of the cyst was removed by electro-dissection. Hemostasis was obtained by electro-coagulation. On release of the traction, the small remaining cuff of tissue receded and disappeared into the bladder. A number 20 Foley catheter was left in the bladder alongside the ureteral catheter. Microscopic examination of the excised specimen revealed a structure lined by a multilayered transitional epithelium. The wall was densely infiltrated with blood. Convalescence of the patient was uneventful. Both catheters were removed on the fifth postoperative day. She was discharged from the hospital March 31, 1948 feeling well and voiding without difficulty. Her urine was hazy and contained many white blood cells.

The patient returned to the follow-up clinic April 9, 1948 and stated that she felt very well. Cystoscopy revealed the following: Urine obtained from the bladder through the cystoscope showed only occasional white blood cells and a few epithelial cells. The bladder mucosa appeared normal throughout. The left ureteral orifice was crescent-shaped and two to three times normal size. The concavity of the crescent was downwards and the upper edge overhanging. A number 7 ureteral catheter was passed to the left renal pelvis. Urine obtained from this catheter was microscopically negative. Indigo carmine given intravenously appeared from the right ureteral orifice in three minutes in 4 plus concentration; it appeared from the left ureteral catheter in three minutes in 3 plus concentration. Left retrograde pyelo-ureterogram showed mild pyelectasis. Three and one-half months later (July 27, 1948) a follow-up excretory urogram was made. The appearance of both pelvo-calyceal systems, both ureters and the bladder was entirely normal.

SUMMARY

A case of ureterocele with prolapse through the urethra has been added to the previously reported list, making the total of published cases at least 43.

REFERENCES

1. Gutierrez, R.: The Modern Treatment of Ureterocele, Surg., Gynec. & Obst. 68: 611-630, 1939.
2. Emmett, J. L. & Logan, G. B.: Ureteocele with Prolapse Through Urethra, J. Urol. 51: 19-23, 1944.
3. Kickham, C. J. E.: Ureterocele with Extrusion Through the Urethra, J. Urol. 52: 235-237, 1944.
4. Abernethy, D. A.: Extrusion and Strangulation of Ureterocele, Brit. J. Urol. 16: 103-105, 1944.
5. Hurwitz, S. P. & McDonough, K. B.: Congenital Ureterocele with Prolapse Through the Urthra, and Strangulation, J. Urol. 53: 773-775, 1945.
6. Ortmayer, M., Koester, L. & Stetler, M. P.: Prolapsus of Ureterocele Through Urethra, J. Urol. 55: 515-519, 1946.

MEDICAL TREATMENT OF CANCER POSSIBLE

In a very real sense all cancer treatment is new. The significant surgical and radiological advances, which have made present day cancer to a large extent a curable disease, have developed only since the turn of the century. Many have resulted from work of the past two decades. It is therefore not utopian to hope that the present intensive research in the chemotherapeutic field will make increasingly possible the medical treatment of cancer.—B. J. Duffy, Jr., M. D., in Rocky Mt. Med. J.

CONTROLLING TUBERCULOSIS

A large share of the success in controlling the disease (tuberculosis) over the years should probably be credited to the intensive educational campaign through which the average person has been taught the importance of early diagnosis and treatment, the recognition of the characteristic symptoms, and the measures to be taken to prevent the spread of the disease. The large number of tuberculosis clinics and sanatoria have also played an important role in saving the lives of tuberculosis patients.—Louis I. Dublin, Ph.D., Health Progress 1936 to 1945, Metropolitan Life Insurance Co.

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

The President's Page

Unity of thought and action is necessary in order to develop a sound, positive, and progressive program in our fight against "socialized medicine."

We cannot hope to be successful by a negative attitude. A positive program is essential. It is necessary that it be voluntary. It should provide for a free choice of physician and hospital and should retain the present personal doctor-patient relationship.

Provision for hospital and medical care during a catastrophic illness should be high on the list of objects of any plan adopted, and protection must be afforded the wage earner against loss of wages during illness.

The following suggestions are offered as a possible solution of the many problems of medical and hospital care under our present system of medicine:

1. Extension of voluntary prepayment sickness insurance, non-profit or commercial, to cover the rural areas. Such insurance should provide for hospital and medical and surgical care while in the hospital, as well as diagnostic procedures by qualified physicians in their offices or in clinics.

2. Federal grants-in-aid to the states, to be disbursed at the local level, to provide for hospitalization, and medical care of the indigent and medically indigent through non-profit insurance plans.

3. Extension of voluntary commercial health and accident group insurance in industrial and rural areas to compensate wage earners for loss of wages during illness.

4. Expansion to ninety days of agreements between employer and employee for the continuance of regular wages during personal illness.

5. Continued study and further agreements by industry with workers for health and welfare funds similar to the one set up by the United Mine Workers of America.

6. Expansion of public health services so that all counties or groups of counties will have a fulltime health unit.

7. Liberalization of the federal hospital construction act (Hill-Burton bill) to provide additional funds on a fifty-fifty matching basis.

8. Federal grants to qualified institutions for research in medicine and allied sciences.

9. Federal grants to medical, dental, and nursing schools for construction, teaching, and expansion purposes.

10. An educational campaign to enlighten the public concerning preventive medicine, hospitalization, and medical care.

All of these points retain the voluntary free enterprise system of the American way of life.

Let's preserve it by developing a positive program.

Thomas G. Reed.

President.

West Virginia Medical Journal

Official Journal of

The West Virginia State Medical Association
302 Atlas Building, Charleston, West Virginia

Editor

Walter E. Vest, M. D. (1951) ..... Huntington

Managing Editor

Mr. Charles Lively ..... Charleston

Associate Editors

W. M. Sheppe, M. D. (1949) ..... Wheeling
Edward J. Van Liere, M. D. (1950) ..... Morgantown
G. G. Irwin, M. D. (1952) ..... Charleston
R. H. Edwards, M. D. (1953) ..... Welch

Editor Emeritus

James R. Blass, M. D. ..... Huntington

Business Manager

Mr. Charles Lively ..... Charleston

Published monthly on the first day of the month, at Charleston, by The West Virginia State Medical Association.

Original articles are accepted on condition that they are contributed exclusively to the Journal.

Advertising rates furnished upon request. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the American Medical Association.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston 24, West Virginia. Telephone, Capitol 34-625.

AFTER NINE YEARS

Reservations for accommodations at the Greenbrier for the annual meeting August 4-6, 1949, are being accepted by the management, and we predict a heavy registration for rooms long before the date of this important meeting, an event but few of our members will want to miss.

It has been a long time since the doctors of West Virginia have met in annual session at the Greenbrier. The last meeting at this world famous resort was held in 1940. The following year the meeting was held in Charleston, and all arrangements had been made for a return to White Sulphur in 1942 when just two or three weeks before the date of the meeting the Army took over the Greenbrier for use as an Army general hospital.

We shall not soon forget that the members of the Cabell County Medical Society and Auxiliary promptly extended an invitation for the meeting to be held in Huntington, and, notwithstanding the short time available for making the necessary arrangements, one of the best meetings of modern times was held there in July of that year.

The new Greenbrier boasts of about every form of entertainment that can be found at any resort hotel in any part of the world. Rehabilitated and redecorated by Dorothy Draper, the hotel itself is regarded as one of the most beautiful in America.

Our own Sam Snead is in charge of the golf courses, which have been world famous for many years, and the tennis courts are among the best to be found in America. Other available entertainment features include the large indoor swimming pool, horseback riding on lovely trails, hiking, and dancing to the music of a Meyer Davis orchestra.

This is a brief resume of the more desirable features to be found at the Greenbrier, and we are assured of a hearty welcome and the best of treatment when we meet there next August.

EARLY AMERICAN MEDICINE

The book reviews published in the West Virginia Medical Journal have, for the most part, drawn favorable criticism from our readers, and an unusual review, which should be a "must" for every member of the West Virginia State Medical Association, is published in this issue. It is Roy Bird Cook's review of Gordon's AEsculapius Comes To the Colonies."

The reviewer has taken a book that is apparently filled with interesting medical history and, by giving it local color, has written a review that will appeal especially to West Virginia doctors who occasionally meditate upon medicine as it was practiced many years ago as compared with practice today.

The reviewer, a noted historian in his own right and one who speaks authoritatively, has done a good job. In fact, his review is a good book in itself.

PROGRAM SHAPES UP

No part of the scientific program for the 82nd annual meeting of the State Medical Association at White Sulphur Springs, August 4-6, 1949, has been released, but we know that Dr. Paul H. Revercomb, the chairman of the program committee, and the other two members, Dr. Carl E. Johnson, of Morgantown, and Dr. J. F. Barker, of Huntington, have just about completed their work.

Announcement concerning some of the speakers who will appear on the program will be made in the June issue of the Journal, and we are assured by the committee that every effort is being made to provide a program that will prove to be of unusual interest to all of the members of the Association.

Several departures from the accepted conduct of scientific sessions are under consideration by the committee, and we are informed that general sessions will be held only in the morning, leaving the afternoon open for meetings of sections and affiliated societies and associations.

Inquiries are being received daily at the headquarters office of the State Medical Association in Charleston concerning the meeting at White Sulphur Springs, and there is every indication that there will be a large attendance of doctors and their wives.

We shall miss the usual high class scientific and technical exhibits and the friendly contact with the detail men of drug and appliance houses. However, it is realized that the omission of exhibits at this meeting is a necessity, due to the utter lack of suitable facilities. It is to be hoped that arrangements can be made to have these high class, attractive and informative exhibits with us at the annual meeting in 1950.

AUXILIARY ACTIVE

Much of the credit for adoption by state women's organizations and groups of resolutions opposing socialized medicine must go to the Woman's Auxiliary to the West Virginia State Medical Association.

Mimeographed letters on the subject were mailed last March to presidents of county Auxiliaries, presidents elect, and public relations chairmen, requesting active participation in the public relations program of the State Medical Association.

The statewide program was immediately activated, and favorable resolutions were passed by the Martinsburg Woman's Club; Wellsburg Civic League; Wellsburg Woman's Club; the Woman's Club of Hundred; White Sulphur Springs Woman's Club; and Charleston Woman's Club.

Subsequently, on April 19, a resolution expressing emphatic opposition to the establishment of socialized medicine and the "expansion of bureaucracy in the United States" was adopted by the West Virginia Federation of Women's Clubs at its 43rd annual meeting in Parkersburg.

Under the leadership of Mrs. W. E. Hoffman, the president, and with the full support of the other officers and the Public Relations Committee, headed by Mrs. Charles H. Goodhand, the campaign for the adoption of similar resolutions by other women's organizations is progressing satisfactorily. The disadvantages of any compulsory insurance plan are being emphasized, and the advantages of voluntary sickness plans stressed at various meetings over the state.

We congratulate the Auxiliary for the active support of its members in what is conceded to be one of the most important and far reaching programs sponsored within the history of the West Virginia State Medical Association.

STATE C. OF C. SPEAKS AGAIN

Henry J. Taylor's broadcast on socialized medicine was published as a condensation in a recent issue of the Reader's Digest under the title, "Shouldn't Doctors Have Rights Too?"

So expertly and interestingly has the author handled the subject that the West Virginia Chamber of Commerce has mailed a copy to each of its members.

The following excerpt is taken from bulletin No. 186, mailed to the members of the State Chamber on April 14:

> " 'Shouldn't Doctors Have Rights Too?' is the title of a concise and provocative article recently published in Reader's Digest as a condensation of a broadcast of Henry J. Taylor, one of the clearest thinking and hardest hitting of all the currently active publicists supporting American enterprise in its struggle against efforts at nationalization, socialization and communization.
>
> "It cannot be repeated too often that these socialistic efforts are directed at the economic system that has produced the greatest benefits for the greatest numbers ever known in history. For example, the 12,000,000 allegedly downtrodden negroes in America own more automobiles than all the 180,000,000 inhabitants of communistic Russia! "As an expose of the loose thinking now extant in high U. S. government posts, Taylor's article will also serve until a better comes along. With the permission of Reader's Digest, the article has been reproduced and a copy is enclosed."

IMPORTANT MESSAGES

Important messages are presented in the advertisements in The Journal each month. New products are announced from time to time and information is presented regarding the use of products featured. Other types of ads emphasize services rendered and commodities offered that may be used in the doctor's practice, his office, and his home. We make every effort to include only ethical advertisements in The Journal.

Please tell the advertisers that you saw their ads in The West Virginia Medical Journal.

GENERAL NEWS

RESERVATIONS FOR ANNUAL MEETING ACCEPTED BY THE GREENBRIER, MAY 1

Late in April a special convention bulletin will be mailed to each member of the West Virginia State Medical Association, concerning room reservations at The Greenbrier, in White Sulphur Springs, for the 82nd annual meeting, August 4-6. Reservations may be made on and after May 1.

In addition to The Greenbrier, facilities will be available at all of the other hotels in White Sulphur Springs. Rooms may be obtained at these downtown hotels by those who do not wish to reserve accomodations at the convention hotel.

It is important that rooms be reserved just as soon as possible so that the management at The Greenbrier and the other White Sulphur hotels may have information concerning the total number of members and their wives who expect to attend the meeting.

The scientific program is nearing completion, and Doctor Paul H. Revercomb, chairman of the Program Committee, has stated that the full schedule of events will be released for publication in the June issue of the West Virginia Medical Journal.

For the first time in many years, the convention will be held without scientific and technical exhibits. This colorful part of the program had to be omitted this year on account of the lack of adequate facilities at The Greenbrier.

Interest in the forthcoming meeting at The Greenbrier is being shown by members of component societies in every part of the state, and there is every indication that the registration will exceed that at any meeting held previously at this resort hotel.

Assurances have been received from the management of The Greenbrier and other hotels in White Sulphur Springs that every effort will be made to find accomodations for all members of the Association and their wives who wish to attend the convention.

DR. WILKINSON HEADS S. E. SURGICAL CONGRESS

Dr. R. J. Wilkinson, of Huntington, past president of the West Virginia State Medical Association, will be installed as president of the Southeastern Surgical Congress at the annual meeting May 23-26, in Biloxi, Mississippi. He succeeds Dr. Gilbert F. Douglas, of Birmingham, Alabama.

Besides Doctor Wilkinson, three West Virginia doctors will appear on the program. Dr. Peter P. Ladwig, of Montgomery, will present a paper on the subject, "Does the Pathologist Need the Clinician's Collaboration?", and Dr. Francis A. Scott and Dr. William B. MacCracken, of Huntington, will jointly present a paper on "End Result Study of Spinal Fusion with Screw Fixation."

Several members of the West Virginia section of the Southeastern Surgical Congress will attend the meeting at Biloxi, using two all-compartment pullmans for the trip. Before returning home, most of the group will spend a few days visiting in New Orleans.

The Casino Golf Club, sports headquarters at The Greenbrier, White Sulphur Springs

CANCER SOCIETY ELECTS OFFICERS AT ANNUAL MEETING HELD IN CHARLESTON

At the annual meeting of the Board of Directors of the West Virginia Cancer Society, Inc., held March 25, 1949, at the Daniel Boone Hotel, in Charleston, the following officers were elected:

Chairman, Dr. Russell B. Bailey, of Wheeling; vice-chairman, Dr. Chauncey B. Wright, of Huntington; secretary, Mr. Charles Lively, of Charleston; and, treasurer, Mr. Homer Gebhardt, of Huntington.

Board of Directors

Previously, at the annual meeting held the same day, the following were elected members of the Board of Directors for the ensuing year:

Drs. Russell B. Bailey, Wheeling; J. M. Brand, Chester; Thomas Bess, Keyser; Elizabeth McFetridge, Shepherdstown; M. L. Hobbs, Morgantown; F. V. Langfitt, Clarksburg; Hugh A. Bailey, Charleston; J. M. Bonnar, Fairmont; Chauncey B. Wright, Huntington;

T. L. Harris, Parkersburg; W. G. J. Putschar, Charleston; C. D. Genge, Huntington; Gibson C. Smith, Hollidays Cove; Frank J. Holroyd, Princeton; and J. L. Patterson, Logan;

Mrs. J. D. Francis, Huntington; Mrs. Frank Klos, Wheeling; Mrs. D. N. Thomas, Weirton; A. B. Koontz, Charleston; Philip Gibson, Huntington; Mrs. D. W. Stubblefield, Charleston; Allan Emmert, Martinsburg; Mrs. E. S. Hamilton, Logan; Mrs. Stanley Morris, Charleston; and Mrs. A. R. Colett, Morgantown.

Appointment of Director Authorized

Mrs. John Speed Harvey, of Huntington, continues as State Commander of the Field Army. The Board authorized the appointment of a director for the society, so that the responsibilities of cancer work in West Virginia may be divided and assumed partly by the field commander and the director.

Executive Committee Named

Members of the Executive Committee were elected as follows:

Dr. Thomas Bess, Keyser; Dr. James M. Bonnar, Fairmont; Dr. Chauncey B. Wright, Huntington; Dr. Frank V. Langfitt, Clarksburg; Dr. M. L. Hobbs, Morgantown; Mrs. E. L. Goldsborough, Shepherdstown; and Mr. Philip Gibson, Huntington.

The Board fixed the 1948-49 allocation for the various county units and other agencies at 45 per cent.

Doctor Nesselroad Banquet Speaker

Dr. C. C. Nesselroad, president of the American Cancer Society, was one of the guest speakers at the banquet held Friday evening, March 25. His subject was, "The Potentialities of the Program of the American Cancer Society." Mrs. Harold B. Milligan, National Commander of the Field Army, also appeared on the program. Her topic was, "The Field Army Marches On." Dr. N. H. Dyer, state health commissioner, discussed the reorganization of the State Department of Health, and Dr. Russell B. Bailey's topic was, "Interlocking Activities of the State Health Department and the West Virginia Cancer Society."

Arthur B. Koontz, of Charleston, state campaign chairman, presided as toastmaster at the banquet, and Dr. Chauncey B. Wright, the president, delivered the address of welcome.

At the luncheon on March 26, Mrs. Fred M. Alexander, National Deputy Commander of the Field Army, was the guest speaker. Her topic was, "The Relationship of the American Cancer Society to State and Local Organizations."

WILL OFFER BY-LAWS AMENDMENT

At the request of the Council of the West Virginia State Medical Association, the Committee on Revision of Constitution and By-Laws will offer the following amendments to the By-Laws at the first meeting of the House of Delegates in White Sulphur Springs, August 4, 1949:

CHAPTER VIII

Section 1. Amend the section by striking out "Fact Finding and Planning Committee" and "Committee on Legislation," and inserting in lieu thereof, "Fact Finding and Legislative Committee"; and, by striking out "Publicity Committee" and inserting in lieu thereof, "Public Relations Committee."

Sec. 4. Amend paragraph (f) to read as follows:

(f) Fact Finding and Legislative Committee. It shall be the duty of the Fact Finding and Legislative Committee to ask for and receive suggestions from the members of the Association; to consider matters affecting the medical profession and make recommendations to the Council and House of Delegates; to conduct a study, conjointly with hospitals and other allied groups, of matters pertaining to the economic, social and similar aspects of medical care for all the people, and suggest means for the distribution of medical service to the public consistent with the principles adopted by the House of Delegates; and to propose or sponsor such legislation as may be thought necessary to improve the health and welfare of the people of West Virginia, and to oppose any legislation which would tend to lower the standards of medical care or which would be inimical to the public welfare.

Amend paragraph (l) to read as follows:

(l) Public Relations Committee. The Public Relations Committee shall handle all public relations work of the Association, and shall be empowered to communicate to the public, in ethical manner, matters pertaining to scientific advances, medical problems affecting the public, and any other information which will tend to provide better understanding between patient and physician.

Delete all of paragraph (h) and reletter paragraphs (i) to (o) inclusive.

The proposed amendments have been approved by the Council and also by the Committee on Revision of Constitution and By-Laws, which is composed of Dr. S. S. Hall, of Clarksburg, chairman, and Drs. R. J. Reed, Jr., Wheeling, R. H. Edwards, Welch, H. L. Hegner, Wellsburg, and C. Y. Moser, Kingwood.

CHEST PHYSICIANS TO MEET IN CHARLESTON

West Virginia members of the American College of Chest Physicians have arranged a program on "Anthracosilicosis," which will be presented May 19, at the Daniel Boone hotel in Charleston.

The program will get under way at 10:00 A. M., and a luncheon will be served at 12:30 P. M., followed by a panel discussion of the papers presented.

Speakers on the program will include Drs. Burgess Gordon, Hurley L. Motley, Peter A. Theodos, and Leonard P. Lang, all on the staff of the Jefferson Medical College hospital, in Philadelphia. The speakers, who have all been making a study of anthracosilicosis, especially among anthracite miners, will discuss the clinical and physiological aspects of the disease.

The program will appeal especially to doctors engaged in practice in coal mining communities, as the discussion will center largely on medical knowledge of anthracosilicosis and miners' dyspnea.

The committee has extended a general invitation to all West Virginia doctors to be present at the meeting. Dr. G. R. Maxwell, of Morgantown, is West Virginia Governor of the American College of Chest Physicians.

CHILDREN'S DIAGNOSTIC CLINIC IN KANAWHA

A children's diagnostic clinic, a cooperative project of the state department of health, the Kanawha-Charleston health department, the Kanawha county school system, and local pediatricians, was opened early in March at the City Building, in Charleston. Five children were examined at the first clinic.

Clinics will be held the first and third Wednesday afternoon in each month. Referral will be made by private physicians, well-child conferences in the Kanawha Valley, school physicians and nurses, welfare clinics, and the general medical clinics in the County-City Health Department.

Each child referred will be given a thorough physical examination for the purpose of diagnosis, and a report of the findings will be sent to the family doctor. A limited fund has been allocated by the Children's Bureau, through the division of maternal and child health, for hospitalization and treatment of the more deserving cases when it is found that the family is unable to assume this responsibility. The staff will be composed of local pediatricians, who will rotate their services; clinical nurses at the County-City Health Department; the state nutritionist; and the state medical social worker.

When it is found that the child's parents do not have a family doctor, provision will be made for the correction of defects without referral.

The clinic is the first of its kind in the state, and was established as a demonstration project upon the recommendation of the pediatricians on the staff of the premature center in South Charleston.

A.M.A. AT ATLANTIC CITY, JUNE 6-10

West Virginia will have a large delegation at the annual meeting of the American Medical Association at Atlantic City, June 6-10. All members of the AMA will be admitted to the general scientific and other meetings. Full information concerning the program will be published in the J.A.M.A. during the month of May. Dr. Walter E. Vest, of Huntington, and Dr. Ivan Fawcett, of Wheeling, members of the AMA House of Delegates, will attend the sessions in Atlantic City.

PR COMMITTEE SCHEDULES CONFERENCE ON MEDICAL CARE AT JACKSON'S MILL

A conference on medical care, statewide in scope, will be held at Jackson's Mill, Saturday, May 21, under the sponsorship of the public relations committee of the West Virginia State Medical Association.

Representatives of consumer groups are being invited to attend the conference, which is scheduled to open at ten o'clock and close late that afternoon.

The object of the conference is to try to seek a solution to the problems of medical care, with particular emphasis on rural, industrial and small town areas. Questions that are being raised daily by consumer groups will be brought out into the open and discussed at the meeting.

A panel which will be composed of the members of the public relations committee and other officials of the State Medical Association will sit throughout the morning and afternoon sessions, and representatives who will attend the meeting have been requested to submit in advance topics which they consider of importance for open discussion.

Dr. Frank J. Holroyd, chairman of the committee in charge, is trying to reach all consumer groups so that medical care for such groups in every area of the state may be considered. The doctor shortage in West Virginia is showing no improvement, and the total lack of medical service in several areas in the state is something that is causing no little concern.

The public relations committee, which will have charge of this important conference, is composed of Doctor Holroyd, and Drs. James S. Klumpp, of Huntington, R. J. Condry, of Elkins, Athey R. Lutz, of Parkersburg, and R. D. Gill, of Wheeling.

"GRASS ROOTS" CONFERENCE

Dr. Frank J. Holroyd, of Princeton, state and area director of the AMA Conference of County Medical Society Officers ("Grass Roots" Conference), has been named as moderator for a panel discussion at the 5th National Conference, at Atlantic City, Sunday, June 5, 1949.

The Conference, which will be held in the Rose Room at the Hotel Traymore, will open at 9:00 a. m., and three panel discussions are scheduled for that morning. Doctor Holroyd will have charge of the panel scheduled for 11:30 o'clock on the topic, "Is Your Society Ready For the National Education Campaign?"

A night session will be held on the same day, and papers will be presented by Mr. Clem Whitaker, director of the AMA National Education Campaign, and Hon. John L. McClellan, U. S. Senator from Arkansas.

AMA INTERIM SESSION IN WASHINGTON

Announcement has been made by the American Medical Association that the third annual Interim Session will be held in Washington, D. C., December 6-9, 1949. Meetings of the House of Delegates will be held at the Hotel Statler, and technical and scientific exhibits will be set up in the District of Columbia National Guard Armory.

COMPONENT SOCIETIES PLEDGE SUPPORT FOR MEDICAL-HOSPITAL SERVICE PLANS

The first concerted action of component societies of the West Virginia State Medical Association to crystallize sentiment against socialized medicine was taken at meetings held simultaneously on March 29-30, in various parts of the state.

At these meetings, which were sponsored by the public relations committee, and which were held by the 29 component societies embracing all 55 counties, resolutions slightly different in form but the same in substance were adopted opposing the socialization of the medical profession, and expressing support for the expansion of present medical and hospital service plans.

Reports of the meetings held were phoned to the headquarters offices of the State Medical Association, and when the last society was heard from it was estimated that over 90 per cent of all doctors practicing in West Virginia had participated in the meetings either in person or by proxy. There are more than 1400 members of the West Virginia State Medical Association.

The doctors present at the meetings went on record as renewing their individual and collective pledge "to protect and improve the health of the people" of their particular areas. They pledged themselves to take steps "to meet any health need that arises and to oppose any attempt to impose socialized medicine upon the people."

Copies of the resolutions adopted have been certified by the chairman of each meeting to the President of the United States, both United States Senators from West Virginia, the Congressmen representing counties within the component society areas, and the American Medical Association.

SCHOOL HEALTH SERVICES SURVEY

A questionnaire on school health services is being mailed by the Bureau of Health Education of the American Medical Association to the secretary of each component society.

The questionnaire is being submitted in connection with a survey that is being made by the AMA in cooperation with the U. S. Office of Education.

It is important that each local society secretary complete and return the questionnaire without delay, as it is the hope of the AMA that this project will demonstrate again the willingness of the medical profession to cooperate in measures designed to bring about improvement of school health programs within the framework of the private practice of medicine.

The U. S. Office of Education will concurrently send questionnaires to schools throughout the country.

FILDES POSTER NOW AVAILABLE

Order cards for the Fildes poster, "The Doctor," which is captioned, "Keep Politics Out of This Picture", were mailed the middle of April by Whittaker & Baxter, AMA public relations experts, to 169,000 doctors in the United States. Duplicate order cards are available at the headquarters offices of the State Medical Association, and will be mailed to members upon request.

STATE DOCTORS ELECTED TO ASSOCIATE FELLOWSHIP AT ACP ANNUAL SESSION

Nearly 30 West Virginia doctors attended the 13th annual session of the American College of Physicians, which was held March 28-April 1, at the Waldorf Astoria, in New York City. All attendance records for annual meetings were broken, with the registration totaling 5,291.

Dr. William S. Middleton, of Madison, Wisconsin, was named president elect, and other officers were elected as follows: First vice president, George F. Strong, Vancouver, British Columbia; second vice president, Roy R. Snowden, Pittsburgh, Pa.; and third vice president, Turner Z. Cason, Jacksonville, Florida.

Regents were named as follows: Drs. William S. McCann, Rochester, New York; T. Grier Miller, Philadelphia; Charles F. Moffatt, Montreal, Quebec; Harold H. Jones, Winfield, Kansas; Edward L. Bortz, Philadelphia; and Wallace M. Yater, Washington, D. C.

Governors for 18 states were elected. Dr. Delivan A. MacGregor, of Wheeling, is the hold-over Governor for West Virginia.

Drs. Irving J. Hanssmann, of Philippi, Harry Pence McCubbin, of Martinsburg, and Lewis Earl Nolan, of Fairmont, were elected to associate fellowship.

The following West Virginia doctors were registered at the meeting:

E. Ross Allen, Clarksburg; Dudley Curtis Ashton, Beckley; Abraham Max Balter, Huntington; Delmer J. Brown, Parkersburg; and Isadore E. Buff, Charleston.

Dante Castrodale, Welch; Charles Belson Chapman, Welch; J. Russell Cook, Huntington; Robert Uriel Drinkard, Jr., Wheeling; and George Francis Evans, Clarksburg.

Lawrence Bernard Gang, Huntington; George Paul Heffner, Charleston; John Pierpont Helmick, Fairmont; Isidore Isaac Hirschman, Huntington; and Frank C. Hodges, Huntington.

Clara M. Iseley, Huntington; Carl Edward Johnson, Morgantown; Ralph J. Jones, Charleston; Max Koenigsberg, Charleston; L. Rush Lambert, Clarksburg; and John E. Lenox, Philippi.

Delivan Alexander MacGregor, Wheeling; M. B. Moore, Huntington; Philip Preiser, Charleston; William Albert Thornhill, Jr., Charleston; Pat Alexander Tuckwiller, Charleston; Walter E. Vest, Huntington; and Halvard Wanger, Shepherdstown.

GOLF AND TENNIS TOURNAMENTS

Committees to handle golf and tennis tournaments at the 82nd annual meeting of the State Medical Association at White Sulphur Springs, August 4-6, have been named by Dr. Paul H. Revercomb, chairman of the program committee.

Drs. James S. Klumpp, of Huntington, R. H. Edwards, of Welch, and James L. Wade, of Parkersburg will handle the golf tournament. Dr. Klumpp will serve as chairman of the committee.

The Tennis committee is composed of Dr. John Lutz, of Charleston, chairman, and Drs. S. L. Bivins, also of Charleston, and William M. Sheppe, of Wheeling.

Full information concerning the two tournaments will be published in the June issue of the West Virginia Medical Journal. It is now known that tournament play will begin Thursday afternoon, August 4, and continue over Friday and Saturday, with play limited to afternoons.

REPORT ON CANCER BY COUNTIES

Effective January 1, 1949, the International Statistical Classification of Diseases, Injuries, and Causes of Death, will list Hodgkin's disease and the leukemias as cancer. This reclassification will result in a slight increase in total cancer deaths reported in West Virginia, for in 1947, there were 77 deaths from the leukemias, and 34 from Hodgkins disease.

According to Dr. N. H. Dyer, state health commissioner, the overall picture of cancer deaths in West Virginia has not changed to any great extent. The 1948 figures show that 999 females died from the disease in 1948 as compared to 943 males. In the age group, 65 and over, there were 875 deaths from cancer, the next group, 55 to 64, being second with 518 deaths. Deaths from the disease begin to show a marked trend after 35 years of age.

In 1948, there were eleven reported deaths from cancer among children under five years of age. Cancer of the digestive organs claimed 826 of the 1,942 persons dying of this disease in 1948. The next leading site was cancer of the uterus, which accounted for 226 of the total deaths. Only 33 persons died last year from cancer of the buccal cavity and pharynx, this site accounting for the lowest number of deaths from the disease.

Through the joint activities of the division of cancer control and the West Virginia Cancer Society, Inc., most urban communities of the state have facilities for the treatment and diagnosis of cancer. The available services are located so as to be within approximately 75 miles of every citizen in the state.

The division of cancer control plans to mail to each doctor in West Virginia a statistical report on cancer for his particular county. The report will include information concerning the total number of deaths, age groups, site, sex, and color.

SOCIETIES REPORT DUES FULLY PAID

Sixteen of the twenty-nine component societies of the West Virginia State Medical Association have reported one hundred per cent payment of 1949 dues by members. Two of the societies, Mercer and the Eastern Panhandle, were the first over the top, Mercer on February 26, and Eastern Panhandle on March 10.

The following is the list of additional societies reporting full payment of dues since the April issue of The Journal came off the press:

Parkersburg Academy
Wyoming
Wetzel
Doddridge
Barbour-Randolph-Tucker
Monongalia
Marshall
Logan
Potomac Valley
Brooke
Taylor
Greenbrier Valley
Boone
McDowell
Harrison

Several additional societies were near the top as the books on the collection of 1949 dues were closed as of April 1.

STATE ACADEMY OF OPH. AND OTOL. IN ANNUAL MEETING AT MARTINSBURG

The second annual meeting of the West Virginia Academy of Ophthalmology and Otolaryngology will be held May 13-14 at the Shenandoah Hotel, in Martinsburg. In addition to the annual business meeting and election of officers, an interesting scientific program has been arranged for the two-day meeting. Speakers and their topics are as follows:

"Medical and Neurological Ophthalmology"—G. G. Gibson, M. D., Philadelphia.

"Facio Maxillary Fractures"—G. Slaughter Fitz-Hugh, M. D., University of Virginia School of Medicine, Charlottesville.

"Headaches"—Walter Klingman, neurologist, University of Virginia School of Medicine, Charlottesville.

"Allergic Manifestations in the Eye"—Charles T. St. Clair, M. D., Bluefield.

"Experiences with Penicillin in Acute Otitis Media"—James K. Stewart, M. D., Wheeling.

The Stone-Jordan film, "Integrated Orbital Implant," will be shown by Orville A. Rawlings, optician, with discussion by John A. B. Holt, M. D., of Charleston.

A social program has been arranged for the wives of members for the afternoon of the first day, featured by a luncheon at Claymont Court. The J. Halleck Moore cup will be presented to the winner of the golf tournament. The annual banquet will be held at the Shenandoah Hotel.

IMPROVEMENT IN BIRTH REPORTING

The division of vital statistics of the state health department is still making every effort to educate the public generally to the importance of obtaining a birth certificate for every child born in West Virginia. All death certificates of infants under one year of age are being checked, and it is found that during the month of January, 1948, only 120 birth certificates were on file for the 152 infant deaths reported.

Of the total deaths reported during the month, but 35 were under 1 day, while 76 were over 1 month of age. Under the laws in force at the present time, registration is required within ten days after birth.

Reporting of births has improved materially during the past ten years. The statistics are necessary if accurate records are to be kept by the state health department and used to measure public health problems in West Virginia for the purpose of placing proper emphasis on long-range program planning.

ASSESSMENTS PAID BY 824 MEMBERS

More than 58 per cent of the members of the West Virginia State Medical Association have paid the AMA assessment. According to figures compiled as of April 15, the assessment has been paid by 824 of the 1419 members.

Over half (51 per cent) of the members have paid the state voluntary contribution, the total number as of April 15 being 740.

Another county, Marshall, has gone over the top during the past month, joining Mercer in the group reporting collections from all of the members.

CONFERENCE OF PRESIDENTS

Discussion of compulsory health plans for medical care and disability compensation will highlight the Fifth Annual meeting of the Conference of Presidents and Other Officers of State Medical Associations which will be held in the Rose Room of the Traymore Hotel at Atlantic City, Sunday afternoon, June 5, the day preceding the opening of the AMA general sessions. The meeting will be open to all physicians.

Cecil Palmer, English publisher, author and journalist, will discuss the impact of socialized medicine on the British doctor and his patients. An American viewpoint of the British health system will be given by W. Alan Richardson, editor of Medical Economics, who is in England at the present time studying all phases of the program.

Other speakers who are scheduled for addresses are Dr. George F. Lull, secretary of the AMA, Dr. Clarence Northcutt, president of the Oklahoma State Medical Association, and Dr. Bert S. Thomas, of San Francisco. A prominent member of Congress will discuss the proposed federal compulsory health program.

AMA AUXILIARY AT HADDON HALL

The 26th annual meeting of the Woman's Auxiliary to the American Medical Association will be held conjointly with the annual meeting of the Association at Atlantic City, June 6-10, 1949.

All sessions will be held at Haddon Hall, and the meeting will be opened formally on Tuesday, June 7, with Mrs. Luther H. Kice, the president, presiding, and will continue through Thursday, June 9.

An invitation has been extended to all members to attend the sessions and to participate in the social functions arranged in connection with the convention. Registration will begin at noon on Sunday, June 5.

Social functions will include a tea honoring Mrs. Kice, and the president elect, Mrs. David B. Allman; a fashion show; a luncheon in honor of past presidents; a luncheon in honor of Mrs. Kice and Mrs. Allman; and the annual dinner for members, husbands and guests.

SURGEONS REELECT DOCTOR BUFORD

Dr. Robert K. Burford, of Charleston, was reelected chairman of the West Virginia section of the Southeastern Surgical Congress at the annual meeting held in Charleston, April 1-2. Dr. Francis L. Coffey, of Huntington, was reelected treasurer, and Mr. R. J. Wilkinson, also of that city, secretary.

The following members of the executive committee were reelected: Drs. Thomas K. Laird, Montgomery; E. L. Gage, Bluefield; Bert Bradford, Jr., Charleston; Charles D. Hershey, Wheeling; and John Francis Barker and Francis L. Coffey, Huntington.

The members of the section voted unanimously to invite the Southeastern Surgical Congress to hold its annual meeting in 1950 at the Greenbrier, in White Sulphur Springs. This invitation will be formally extended to the Congress at the annual meeting, which will be held May 23-26, at Biloxi, Mississippi.

CANCER REFERRALS INCREASE

Referrals of cancer patients to the division of cancer control of the state department of health for the first three months of 1949 showed a substantial increase over the same period last year, the referrals totaling 192 for the first quarter of 1949 as against 127 in 1948.

It was necessary some time ago for the division of cancer control to establish the policy of limiting treatment to patients whom it is considered might be benefited. Limited funds have not permitted treatment under the program for advanced or terminal cases, but diagnostic services are available at all times to any needy person.

In a report just made public by the division, deaths from "ill defined cancer" have shown a decrease in West Virginia, and "other and unspecified" cancer deaths decreased from 171 in 1947 to 148 last year. During the same period, "tumors of undetermined nature" decreased from 76 to 54.

CONGRESS ON RHEUMATIC DISEASES

The 7th annual Congress on Rheumatic Diseases will be held May 30-June 3 at the Waldorf Astoria in New York City. The Congress is sponsored and supported by several organizations, including the American Rheumatism Association, the United States Public Health Service, and the Arthritis and Rheumatism Foundation.

Following the meeting in New York, it is expected that many of those present will go to Atlantic City for the annual meeting of the American Medical Association, where several papers on rheumatic diseases will be presented before various sections.

A copy of the complete program may be obtained by writing to Mr. Robert D. Potter, Executive Director, 535 Fifth Avenue, New York, New York.

FINAL MEETING OF PHC ON MAY 12

The public health council, which will go out of existence June 30, has scheduled what will probably be the last meeting before the new law providing for a medical licensing board becomes effective.

A special meeting of the PHC will be held May 12 for the purpose of considering the report of a special committee with reference to the proposed plan for the temporary employment of interns and residents in critical areas in West Virginia.

The Committee will present a plan that is designed to help relieve the acute shortage of doctors in various parts of the state, as well as providing relief for doctors in industrial and rural areas who have found it impossible to obtain relief doctors for vacation periods and during periods of personal illness.

The committee is composed of Drs. T. Maxfield Barber, and Russell Kessel, representing the West Virginia State Medical Association, and W. P. Bittinger, W. W. Point and N. H. Dyer, members of the PHC.

The next regular meeting of the licensing board, under the name of Medical Licensing Board, is scheduled for July 7-9, in Charleston, when examinations will be given applicants for licensure to practice in West Virginia.

APPROPRIATION OF $15,000 MADE FOR CONTINUANCE OF CANCER WORK

The West Virginia Cancer Society, Inc., has appropriated the sum of $15,000.00 for the treatment and care of cancer patients during the remainder of the fiscal year. The fund will be made available at the rate of $5,000.00 a month for May, June, and July, and will be paid directly by the treasurer upon certification of bills by the State Health Department.

This probably marks the first time that any state agency has used funds appropriated by a private organization for payment for services rendered in connection with the conduct of any state program. All funds appropriated for the use of the division of cancer control have been expended, and action by the West Virginia Cancer Society followed the failure of the legislature to pass a deficiency appropriation to cover the period of the last quarter of the current fiscal year.

The need for additional funds for use in cancer control work has been apparent for some time, and the legislature, recognizing the increase in the number of patients cared for by the division of cancer control, increased the appropriation for this purpose to the extent of $25,000.00 per year. The sum of $75,000.00 will be available for each year during the biennium beginning July 1, 1949, and this sum will be augmented by a federal grant of approximately $34,000.00 per annum.

SOUTHERN MEDICAL IN CINCINNATI

The 43rd annual meeting of the Southern Medical Association will be held November 14-17, 1949, at the Netherland Plaza Hotel, in Cincinnati. The host society will be the Campbell-Kenton County Medical Society of Northern Kentucky. Newport and Covington are the principal cities of this two-county society, but the meeting is being held across the river in Cincinnati in order to take advantage of hotel facilities available there.

For the first time since the war a full schedule is being arranged, including meetings of all seventeen sections. A general session for the transaction of official business will be held on Monday, November 14.

The scientific program will get under way that afternoon, when two general clinical sessions, one medical and one surgical, will be held. The section programs will begin on Tuesday and continue through Thursday.

Dr. Andrew E. Amick, of Lewisburg, is a member of the Council of the Southern Medical Association, and Dr. J. J. Brandabur, of Huntington, is secretary of the Section on Industrial Medicine and Surgery.

AMERICAN GOITER ASSOCIATION TO MEET

The annual meeting of the American Goiter Association will be held May 26-28, 1949, at the Hotel Loraine, in Madison, Wisconsin, and it is expected that approximately four hundred doctors will attend the sessions. Dr. Arnold S. Jackson, of Madison, is president of the Association, and Dr. George Crile, Jr., of Cleveland, chairman of the program committee. All members of state and national medical societies are invited to attend the meeting.

RELOCATIONS

Dr. Glen F. Palmer, who has completed his postgraduate studies at Tulane University, New Orleans, has located at Madison, where he will engage in general practice.

* * * *

Dr. Henry A. Wiseman, III, has moved from Glen Ferris to Montgomery, where he has accepted a residency in surgery at Laird Memorial Hospital.

* * * *

Dr. J. Marshall Carter, formerly of Glen Ferris, who has been engaged in the practice of orthopedic surgery at Lake Charles, Louisiana, and who, for the past few months has been on the staff at the Williamson Memorial Hospital, in Williamson, has moved to Huntington, where he will continue the practice of his specialty as a member of the staff of the Memorial Hospital, in that city.

* * * *

Dr. Shelby E. Jarrell, of Whitesville, has moved to Harrisville, where he will continue in general practice.

* * * *

Dr. Harris P. Pearson, of Bluefield, has moved to Roanoke, Virginia, where he will continue his duties as medical examiner for the Norfolk & Western Railway Company.

STATISTICAL REPORT

An increase in population in West Virginia during 1948 resulted in a decrease in the death rate per 1,000 population from 9.3 to 9.2, notwithstanding a slight increase in the number of deaths reported. There were 17,626 deaths in the state in 1948 as compared to 17,188 in 1947.

The ten leading causes of death accounted for more than three-fourths of all the deaths in the state last year. Diseases of the heart showed the greatest increase, with 4,740 deaths last year as compared to 4,470 in 1947.

The following table shows the ten leading causes of death in West Virginia for 1947-1948:

	1948		*1947*	
Causes of Death	*No.*	*Rate**	*No.*	*Rate**
Diseases of the Heart	4,740	247.5	4,470	241.7
Cancer and Other Tumors (All forms)	1,942	101.4	1,947	105.3
Cerebral Hemorrhage	1,670	87.2	1,542	83.4
Accidents (Except Motor Vehicle)	1,256	65.6	1,099	59.4
Nephritis	932	48.7	944	51.0
Pneumonia and Influenza	859	44.8	1,013	54.8
Premature Birth	665	34.7	734	39.7
Tuberculosis (All forms)	623	32.5	681	36.8
Motor Vehicle Accidents	466	24.3	399	21.6
Diabetes	378	19.7	403	21.8

*Rate per 100,000 population.

DR. GEO. F. LULL IN CHARLESTON

Dr. George F. Lull, secretary and general manager of the American Medical Association, is scheduled for a meeting in Charleston as this issue of The Journal is on the press (April 27). He is appearing at a luncheon meeting sponsored by the Woman's Auxiliary to the Kanawha Medical Society, and his topic is, "What Compulsory Health Insurance Means to the People."

The meeting, which is being held at the Daniel Boone hotel, will be attended by representatives of local

civic, service, and welfare organizations, and representatives of many professions and business and manufacturing concerns in the Kanawha Valley. Both the press and radio will be well represented at the meeting.

A roundtable discussion of the proposed federal compulsory health insurance plan, led by Doctor Lull, will follow the speaking program.

A special meeting of the PR committee has been called by the chairman, Dr. Frank J. Holroyd, for the morning of April 27, and members present will attend the luncheon.

The spring meeting of the Auxiliary to the West Virginia State Medical Association will be held the same day in Charleston, and Mrs. W. E. Hoffman, the president, is making a special effort to have all county auxiliaries represented at the luncheon.

MILLER PORTRAIT UNVEILED

A portrait of Doctor Joseph L. Miller, of Thomas, was presented to the Richmond Academy of Medicine and unveiled on March 12. The following account of the ceremonies is taken from the April issue of the Virginia Medical Monthly:

> "The family of Dr. Joseph L. Miller, of Thomas, West Virginia, presented his portrait to the Richmond Academy of Medicine on March 12th. The ceremony was held in the Miller Library of the Academy, which houses a collection of rare medical books, portraits, prints, autographed letters, silhouettes and medical instruments, presented by Dr. Miller in 1932.
>
> "The portrait, which was painted by David Silvette, was unveiled by Mrs. Henderson H. Miller, of New York. It was presented by Dr. James H. Smith and accepted by Dr. Wyndham B. Blanton. Dr. Harry Warthen, president of the Academy, presided at the ceremony.
>
> "Dr. Miller graduated from the Medical College of Virginia in 1900 and received the honorary doctorate of literature from that institution in 1931. He has been made a life member of the Historical Society of Virginia and an hororary member of the Richmond Academy of Medicine."

Doctor Miller, who is still in active practice in his home city of Thomas, was honored by the Barbour-Randolph-Tucker Medical Society at a recent meeting by being elected to honorary lifetime membership. He has practiced continuously in Thomas since 1901.

COUNTY SOCIETIES NECESSARY

The County Society is the hub of all local medical activity. It not only advances our science; it formulates medicine's public policies and develops educational pursuits for laymen who need it most of all; it directs opposition to destructive legislation; it relegates opponents of scientific medicine to their proper place; and it uncovers and exposes subversive elements.

Without actively and enthusiastically supported county societies our public service efforts will lag, public relations programs will deteriorate into mere efforts to obtain publicity, lay educational enterprises will fail, adverse legislation and unscientific cults will prosper, and regional and national parent medical organizations will suffer in proportion.—Rock Mountain Medical Journal.

ANNUAL AUDIT

The annual audit of receipts and disbursements of the West Virginia State Medical Association for the calendar year 1948 has been completed by Norman S. Fitzhugh, Jr., Certified Public Accountant, and submitted to the treasurer, Dr. T. M. Barber, of Charleston. The complete audit follows:

Dr. T. M. Barber, Treasurer
West Virginia State Medical Association
Charleston, West Virginia

I have audited the receipts and disbursements of the West Virginia State Medical Association for the calendar year ended December 31, 1948, and am submitting herewith statements covering the various funds for the year under review.

All receipts of record and all disbursements were verified and the cash balance was reconciled with statements of the depository bank. Sufficient tests were made of available information to satisfy me that all receipts had been properly recorded. Cancelled checks evidencing all disbursements were on hand except for five checks dated in December 1948, totaling $52.97 which had not been cleared by the bank at December 31, 1948.

I therefore certify that, in my opinion, all receipts in the year under review have been properly accounted for and all receipts and disbursements are correctly stated on the books and in the statements attached hereto.

I further certify that the balance in bank at the close of business on December 31, 1948 amounted to $8,498.53.

A statement of cash follows:

Balance December 31, 1947	$12,381.35
Receipts—1948	36,614.35
Total	48,995.70
Disbursements—1948	40,497.17
Balance December 31, 1948	$ 8,498.53

The cash balance at December 31, 1948 is attributable to the various funds as follows:

General Fund	$ 4,232.86
Medical Journal Fund	6,405.53
Total	$10,638.39
Less: Convention Fund—Deficit	(2,139.86)
Total All Funds	$ 8,498.53

United States Treasury Registered 2% Bonds having a face value of $22,000.00 were inspected by me in your safety deposit box on March 22, 1949.

A comparative statement of assets at December 31, 1947 and December 31, 1948 is as follows:

	Dec. 31, 1947	Dec. 31, 1948	Increase (Decrease)
Cash in Bank	$12,381.35	$ 8,498.53	($3,882.82)
U. S. Treasury 2% Bonds (Face value $22,000.00) —at cost	22,101.53	22,101.53	
Totals	$34,482.88	$30,600.06	($3,882.82)

NORMAN S. FITZHUGH, JR.,
Certified Public Accountant.

Charleston, W. Va.
March 29, 1949.

COMBINED STATEMENT OF RECEIPTS AND DISBURSEMENTS

Calendar Year 1948

BALANCE JANUARY 1, 1948		$12,381.35
RECEIPTS:		
Dues (net)	$18,930.00	
Interest on U. S. Bonds	440.00	
Advertising	13,950.05	
Emblems Sold	270.50	
Subscriptions to Journal	119.92	
Commercial Exhibits	2,880.00	
Miscellaneous	23.88	
Total Receipts		36,614.35
		$48,995.70

TREATMENT OF CONSTIPATION IN

mucous colitis

"The treatment of the constipation in mucous colic does not differ from the treatment of uncomplicated constipation. It is, as always, of great importance to avoid irritating aperients, ... The stools should be rendered soft and more bulky and therefore more easy to expel with . . . and unirritating vegetable mucilages."

—Hurst, A., in Portis, S. A.: Diseases of the Digestive System. ed. 2, Philadelphia, Lea & Febiger, 1944, p. 692.

MUCOUS COLITIS. In this x-ray is shown the distinctive string-like appearance of the descending portion of the lower bowel in mucous colitis, a condition frequently accompanying severe degrees of spastic or atonic colon. In the sagittal section is shown the over-secretion of mucus adhering to the bowel wall.

By providing soft, demulcent, water-retaining, mucilloid bulk, Metamucil—the "smoothage" treatment of constipation—promotes a return to normal elimination.

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

METAMUCIL® is the highly refined mucilloid of Plantago ovata (50%), a seed of the psyllium group, combined with dextrose (50%), as a dispersing agent.

SEARLE *Research in the Service of Medicine*

G. D. SEARLE & CO., CHICAGO 80, ILLINOIS

DISBURSEMENTS:		
General Fund	$21,194.35	
Medical Journal Fund	15,523.78	
Convention Fund	3,779.04	
Total Disbursements		40,497.17
BALANCE—DECEMBER 31, 1948		$ 8,498.53

Cash in Bank December 31, 1948 — $8,498.53

GENERAL FUND

Statement of Receipts and Disbursements
Calendar Year 1948

BALANCE JANUARY 1, 1948			$ 1,055.71
RECEIPTS:			
Dues	$18,975.00		
Less: Refunds	45.00	$18,930.00	
Interest on U. S. Bonds		440.00	
Miscellaneous		1.50	
Transferred from Medical Journal Fund (Ordered by Council 5-9-48)		5,000.00	
Total Receipts			24,371.50
			$25,427.21
DISBURSEMENTS:			
Salary—Executive Secretary (Less Payroll Taxes)		$6,289.20	
Office Salaries (Less Payroll Taxes)		3,561.44	
Office Supplies and Expense		928.10	
Office Rent		1,500.00	
Library Expense		60.00	
Telephone and Telegraph		532.18	
Postage		542.20	
Travel		1,596.44	
Miscellaneous Expense		654.31	
Purchase of Auto for Executive Secretary		1,895.76	
Social Security Tax		145.62	
Secretary's Conference		693.18	
Veterans Administrative Program		140.00	
Withholding Tax		1,719.50	
Mimeographing		294.60	
Expenses of Meetings—Council and Association Committees		641.82	
Total Disbursements			21,194.35
BALANCE DECEMBER 31, 1948			$ 4,232.86

MEDICAL JOURNAL FUND

Statement of Receipts and Disbursements
Calendar Year 1948

BALANCE JANUARY 1, 1948		$12,566.46
RECEIPTS:		
Advertising	$13,950.05	
Emblems Sold	270.50	
Subscriptions to Journal	119.92	
Miscellaneous	22.38	
Total Receipts		14,362.85
		$26,929.31
DISBURSEMENTS:		
Printing	$11,521.75	
Engraving	252.78	
Postage	155.00	
Emblems and Frames Purchased	300.00	
Miscellaneous Expense	744.25	
Salaries	2,550.00	
Transferred to General Fund	5,000.00	
Total Disbursements		20,523.78
BALANCE DECEMBER 31, 1948		$ 6,405.53

CONVENTION FUND

Statement of Receipts and Disbursements
Calendar Year 1948

BALANCE (DEFICIT) JANUARY 1, 1948		($1,240.82)
RECEIPTS:		
Commercial Exhibits		2,880.00
		$1,639.18
DISBURSEMENTS:		
Supplies and Labor	$ 1,924.32	
Travel	806.89	
Entertainment	612.07	
Reporting	250.00	
Miscellaneous Expenses	185.76	
Total Disbursements		3,779.04
BALANCE (DEFICIT)—DECEMBER 31, 1948		($2,139.86)

GENOCIDE

The crime of *genocide* is defined as "deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part."

It is of interest to the medical profession, because an amendment to our Hippocratic Oath was drafted and approved at the 1948 meeting of the World Medical Association in New York City. It is the first amendment to that ancient and honorable document in 2,000 years.

The objective of the World Medical Association in this proposal was to outlaw medical crimes in the event of war, such as using human beings for experiments, permitting mass killings and deliberate starvation. In the post war II trials, German physicians were found guilty of these crimes.

The subject has had two years study by the Legal Committee of the General Assembly of the United Nations. The legal committee objective was to outlaw "the destruction in whole or in part of a national, ethnic, racial or religious group."

The United Nations has approved the draft and report of its legal commission, and after it is signed by twenty nations, it goes into effect and permits punishment under international law for this particularly debased form of wholesale murder.

The systematic extermination, by the Nazis, of six million European Jews, between 1933 and 1945, made the appeal for outlawry irresistible.

The outlawry of *genocide* is a long legal step in the right direction.—New York Medicine.

DOCTORS IN POLITICS

Our idea of doctors in politics is that they should materially affect legislation and other policy-making in the Government in order to make medicine a more effective instrument for the health and welfare of the people. They should be able to secure at all times top priority in appropriations for all health and welfare projects, commensurate with the importance of these activities, and should fight the spending of public funds on activities of less essential, dubious, or even downright unnnecessary nature, with the assurance that they will get the full support and cooperation of the medical profession, and the blessings of the public.—Philippine Journal of Surgery.

THE WEST VIRGINIA MEDICAL JOURNAL

302 ATLAS BUILDING, CHARLESTON, W. VA.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Editor
WALTER E. VEST, M. D.
955 Fourth Ave.
Huntington, W. Va.

Managing Editor and
Business Manager
MR. CHARLES LIVELY
Box 1031
Charleston 24, W. Va.

Associate Editors:
EDWARD J. VAN LIERE, M. D.
Morgantown, W. Va.
W. M. SHEPPE, M. D.
Wheeling, W. Va.
G. G. IRWIN, M. D.
Charleston, W. Va.
R. H. EDWARDS, M. D.
Welch, W. Va.

JAMES R. BLOSS, M. D., Editor Emeritus, Huntington

Vol. XLV JUNE, 1949 No. 6

ANTHRACOSILICOSIS AND ITS SYMPTOMATIC TREATMENT*†

By

BURGESS GORDON, M. D., HURLEY L. MOTLEY, M. D., PETER A. THEODOS, M. D., and LEONARD P. LANG, M. D., Philadelphia

By the term "anthracosilicosis" is meant the condition of progressive pulmonary fibrosis with conglomeration of nodules in the advanced stages, caused by the inhalation of carbon and silica, and characterized clinically by dyspnea, with varying degrees of disability. It is a descriptive term for the pneumonoconiosis of coal miners. The broader designation, "coal miners' pneumonoconiosis", used less frequently, refers to the bizarre and varied lesions of pulmonary fibrosis, emphysema, marked areas of conglomeration and distortion of the bronchi and other thoracic structures.

Silicosis, sometimes used synonymously with anthracosilicosis, is a chronic, diseased condition of the lungs caused by the inhalation of air-containing, finely divided particles of silica. While the term implies that silica is the fundamental cause, it is known that similar pathologic and clinical features occur in laborers who work in an atmosphere of coal dust in which the percentage of silica is low. Gough[1] studied the pathology of British coal trimmers whose only employment in the coal industry was to load semi-bituminous or steam coal into ships in an atmosphere laden with coal dust. He found that the changes in the lungs were identical with those of miners who worked in the mines. Likewise, the roentgenologic features were similar in miners who had been employed in the mining of bituminous and anthracite coal. While the nodular and confluent types of silicosis are characteristic, it is known that atypical forms and marked gradations occur. It appears at present, therefore, that the term anthracosilicosis is preferable, since it designates the conditions of pulmonary fibrosis with nodulation and emphysema of varying degrees resulting from the mining of coal.

The characteristic pathology of the lungs affected with silica includes the silicotic nodule, the avascular laminated fibrous whorls, the perilymphatic fibrosis, thickened and dilated alveoli, conglomerate masses of tissue replacing the silicotic nodules, diffuse or generalized fibrosis and emphysema. With the advanced cases, tenting of the diaphram, marked areas of localized emphysema, bullae and retractions or displacements of bronchi are found. There is a modified type of reaction to silica, due apparently to the association of carbon dust as characterized by collections of phagocytes in the alveoli without thickening of the adjacent wall. These processes are found in the lymph nodes, the lymphatics, under the pleura and throughout the lung. Areas of focal emphysema or distention of the alveoli are sometimes noted.[1] Tuberculosis, bronchitis and bronchiectasis are found not infrequently as associated conditions. Tuberculosis usually is walled off by the surrounding pulmonary fibrosis.

The present study is concerned with a review

*From the Barton Memorial Division, Jefferson Medical College Hospital, and the Department of Medicine, Jefferson Medical College, Philadelphia, Pa.

†Part of the expense for this investigation was defrayed by a grant from the Anthracite Health & Welfare Fund of the Jefferson Medical College Hospital.

of the physical signs and symptoms of anthracosilicosis and the evalution of data on pulmonary function studies of coal miners admitted by rotation to the Barton Memorial Hospital. Attention is drawn especially to findings that indicate the disproportion between the signs and symptoms of anthracosilicosis, and likewise to the various processes unrelated to the condition that may be responsible for the production of dyspnea. Statistical analysis of symptoms is shown in table 1; the causes of dyspnea due to conditions other than anthracosilicosis are shown in table 2.

TABLE 1

Symptoms of Anthracosilicosis in 350 Miners*

	321 Hard Coal Miners		29 Soft Coal Miners	
	No.	%	No.	%
Dyspnea	284	88.5	26	89.7
Weight Loss	229	71.3	16	55.2
Cough	220	68.5	16	55.2
Weakness	221	68.8	21	72.4
Expectoration	197	61.4	14	48.3
Chest Pain	162	50.5	16	55.2
Hemoptysis	116	36.1	4	13.8

*Two or more symptoms usually occurred in the same miner.

Chief Cause for Work Stoppage

	321 Hard Coal Miners		29 Soft Coal Miners	
	No.	%	No.	%
Dyspnea	247	76.9	21	72.4
"Chest Cold"	16	4.98		
Weakness	12	3.7	3	10.3
Chest Pain	12	3.7	2	6.9
Onset of TB	10	3.1		
Hemoptysis	6	1.9		
Non-Medical	23	7.2	2	6.9

Length of Dyspnea Before Work Stoppage

	269 Hard Coal Miners		27 Soft Coal Miners	
	No.	%	No.	%
Less than 1 year	66	24.5	6	22.2
1-2 years	64	23.8	4	14.8
2-3 years	29	10.8	6	22.2
3-4 years	28	10.4	2	7.4
4-5 years	15	5.6	1	3.7
Above 5 years	67	24.9	8	29.6

TABLE 2

Causes of Dyspnea

Pulmonary
1. Stenosis or Pressure on the Upper or Lower Air Passages
   - (a) Laryngeal stenosis—inspiratory
   - (b) aneurysm
   - (c) mediastinal tumors
   - (d) asthma—expiratory
   - (e) fibrinous bronchitis
   - (f) bronchiolitis
   - (g) foreign body
   - (h) new growth of the bronchus
2. Extensive fibrosis—interference with alveolar gas exchange
   - (a) tuberculosis
   - (b) silicosis
   - (c) sarcoidosis
   - (d) fungous disease
3. Extra-pulmonary Pleural Effusions
   - (a) acute pleurisy
   - (b) pneumothorax—therapeutic and spontaneous
   - (c) thoracoplasty
4. Toxemia from acute pulmonary inflammation—acute exudative tuberculosis and penumonia
5. Temporary bronchial obstruction—massive atelectasis
6. Other causes
   - (a) Emphysema
   - (b) Cystic Disease
   - (c) Obstructive Emphysema
7. New Growth of the Lung

Cardiac and Circulatory Factors
1. Congestive Heart Failure—pulmonary congestion
2. Paroxysmal Dyspnea (cardiac asthma)
   - (a) aortic disease
   - (b) hypertension
   - (c) coronary insufficiency and thrombosis
   - (d) myocarditis
3. Acute and Chronic Pericarditis
4. Aneurysm and Congenital Heart Disease
5. Pulmonary Hypertension
6. Pulmonary Arteriolar Sclerosis

Metabolic
1. Uremia
2. Diabetic Acidosis
3. Carbon Monoxide Poisoning

Blood
1. Anemia
2. Polycythemia

PHYSICAL SIGNS

The characteristic physical signs of the chest in anthracosilicosis include an increase of the anteroposterior diameters of the chest, elevation of the ribs and a preponderance of the abdominal type of breathing. A feature of the emphysema *per se* is the lowered diaphragm with limited diaphragmatic excursions, even during forceful respirations. The percussion note varies in degrees of hyperresonance, depending largely on the extent of emphysema and underlying fibrosis. Rales also are variable, the most characteristic being the musical type as heard during forceful expiration. The breath sounds may be exaggerated and vesicular, or breezy in type. In associated tuberculosis, there is lagging of the respiratory excursions over the affected area, with impariment of the percussion note, exaggerated breath sounds and fine or coarse rales. Clubbing of the fingers is not uncommon especially in advanced cases with associated bronchiectasis.

It is interesting that the physical signs do not always disclose the extent of the underlying disease, as emphasized repeatedly in comparing the findings of the physical examinations with the x-rays and the pathology. A remarkable feature is that extensive processes may be almost entirely masked for years until intercurrent infection or a failing pulmonary circulation accentuates the underlying disease. Coal miners are especially susceptible to tracheobronchitis and localized pulmonary congestion. With these complications, the breath sounds and rales may become remarkably accentuated. The mechanism probably is related to retention of secretions in the smaller bronchi. In some instances, the signs are exaggerated following long-continued rest in bed due, possibly, to gain in weight, faulty

breathing and physical deterioration, as occurs in athletes on vacation from systematic training. These aspects will be presented in a subsequent paper.[2]

SYMPTOMS

The present study indicates that dyspnea in varying degrees may be expected in 85 to 90 per cent of coal miners with moderately advanced or far advanced anthracosilicosis. A feature of the onset is the insidious and gradual impairment of breathing, accentuated by bouts of intercurrent respiratory tract infection. The actual onset may precede by several years the time when the miner decides to stop work because of difficult breathing. It is a curious aspect

Fig. 1
Photograph of the Intermittent Positive Pressure Breathing—Nebulizer Treatment Unit (Barton model). The cycling valve, pressure control regulator, and gauges are located on the top of the cabinet. The air compressor and mixing chamber for introducing oxygen or helium are located in the cabinet. The apparatus is manufactured by V. Roy Bennett, 8154 Beverly Boulevard, Los Angeles, California.

of the disease that dyspnea becomes more apparent during or following a respite from work, as in the prolonged shut-down of coal mines.

The progressive impairment of breathing is due to pulmonary fibrosis, with replacement of the functioning respiratory units of the lung and gradual diminution of the total area of respiratory epithelium in association with the varied pulmonary and bronchial complications. The associated pleural thickening and adhesions favor limitation of lung expansion and are important factors in the development of pulmonary insufficiency. Dyspnea may be gradual in cases with the typical nodular type of disease, but with massive conglomerate lesions the course usually is accelerated. Eventually, the associated symptoms of cough and expectoration accentuate the dyspnea and life becomes difficult.

While dyspnea is a feature of anthracosilicosis, it is realized that the symptom may appear in a wide variety of other conditions, for example, in cardiovascular disease, obstruction of the respiratory tract due to tumors and foreign bodies, and diseases of the pleura, lungs, and mediastinum. Since these conditions may occur in miners of 55 to 65 years of age, as well as in other persons of the same age, the importance of careful study is recognized.

The signs of failure of the general circulation in anthracosilicosis are uncommon, except in advanced cases and in those with associated myocardial disease. Cyanosis is infrequent. Edema may occur in terminal cases; enlargement of the liver is sometimes noted.

Fever, loss of weight, profuse expectoration and rapid pulse are not uncommon in superimposed pulmonary tuberculosis and may become more prominent than dyspnea. The sputum often varies in color and viscosity, but the ordinary specimens rarely contain tubercle bacilli. Differential diagnosis usually requires special roentgenologic study (planigrams), bronchoscopy and careful bacteriologic cultures.

PULMONARY FUNCTION IMPAIRMENT

The nature of breathing impairment in anthracosilicosis has been studied by physiologic methods in over 150 anthracite coal miners and 25 bituminous coal miners with respiratory complaints attributed to prolonged exposure to dust inside of coal mines for twenty to forty years. The degree of pulmonary emphysema was evaluated from quantitative measurements of residual air as determined by the oxygen open circuit method and expressed as per cent of the total lung volume (residual air, vital capacity). Maximum breathing capacity, vital capacity and the roentgenologic stage of silicosis were compared with the degree of pulmonary emphysema as determined by quantitative measurements of residual air. Expressing the residual air in per cent of total lung volume provides a physiologic comparison of the relationship of the volume of residual air to the mixing and dilution factor with respect to the vital capacity and total lung volume.

Fig. 2

Photograph of Intermittent Positive Pressure Breathing—Nebulization Apparatus. As with the Treatment Unit (Photograph 1), exhalation through the cycling valve is avoided, simplifying operation and maintenance. The assembly is designed primarily for the use of oxygen and helium.

The studies indicated that alterations in the maximum breathing capacity, with few exceptions, were a more reliable criterion of pulmonary impairment than the deviations in vital capacity.[3] However, maximum breathing capacity was of limited value in appraising the pulmonary function impairment in patients with little or no pulmonary emphysema. In approximately one-third of the miners, the degree of emphysema was insignificant and the residual air represented 35 per cent or less of the total lung volume.[3] It was found that hyperventilation may be adequate as a compensatory mechanism in the early stages of pulmonary emphysema—in fact, until loss of elasticity of the lungs and the chest wall lowers the dyspnea level and restricts normal ventilation. There was no constant correlation of the roentgenologic stages of silicosis and the degree of emphysema present (table 3). It was interesting to note that in certain cases the effects of anthracosilicosis were visualized in the roentgenogram when the pulmonary function was only moderately involved, while in other cases

with minimal roentgenologic changes the pulmonary function was greatly altered.

TABLE 3

Degree of Emphysema Versus Stage of Silicosis As Seen By X-Ray

Groups	Degree of Emphysema	No. of Cases	Stage of Anthracosilicosis			
			Normal or Borderline	1st	2nd	3d
1	None	25	5	1	8	11
2	Slight	45	6	4	10	25
3	Moderate	60	4	7	4	45
4	Advanced	44	2	7	8	27
5	Far Advanced	46	4	8	8	26
	Total No.	220	21	27	38	134

Studies of the respiratory gas exchange, including analysis of the expired air and arterial blood drawn from the brachial artery directly, provided important information pertaining to the distribution of the inspired air and the pulmonary blood flow. Analysis of expired air revealed that in the majority of coal miners the removal of oxygen per given volume of air breathed was decreased from normal level. In some instances, particularly in subjects with an advanced degree of pulmonary emphysema, the amount of oxygen removed during exercise for a given volume of air breathed was less than that during the period of rest, whereas in normal individuals, the amount of oxygen removed during exercise was increased as compared with the resting value. Figures on the amount of carbon dioxide removed from the blood were somewhat parallel with those noted for oxygen.

It is considered that the decreased efficiency for oxygen uptake and carbon dioxide removal is primarily related to distribution, pertaining both to the intra-pulmonary mixing of the inspired air and the pulmonary blood flow. The impaired intrapulmonary mixing of air is attributed to unequal alveolar aeration, whereby some alveoli are poorly aerated with air but normally perfused with blood from the pulmonary circulation. With respect to the distribution factor as it affects the pulmonary circulation, some alveoli in the lungs may be perfused with blood, but due to the fibrosis no aeration of the alveoli occurs. The circulatory pathways act as small shunts and with extensive involvement the arterial oxygen saturation is noticeably lowered. In other instances, blood perfusion in alveoli may be absent because of the obliteration of blood vessels due to pulmonary fibrosis; the blood is shunted away from the involved area. Thus, from the standpoint of distribution of air, the affected alveoli act in the capacity of an increased dead space. The impaired distribution factor causes an increased mean gradient of pressure for oxygen between the alveoli and the arterial blood, in some instances as high as 50 mm. of mercury (normal 5 mm.). It was observed in studies with high and low levels of oxygenation that the increased pO_2 gradient is primarily an impairment of distribution and not of diffusion through the pulmonary membrane. Some patients with no manifest emphysema exhibit a moderate distribution impairment, resulting in a resting arterial oxygen saturation of less than 90 per cent.

Referring specifically to the role of emphysema as a cause of dyspnea, it is observed that emphysema is not necessarily the important factor. While dyspnea is moderately extreme in some cases, there is no evidence of emphysema, either clinically, roentgenologically or physiologically. The basic factor of dyspnea in these cases is the resistance encountered in moving air in and out of the lungs due to the obstruction of bronchioles, localized pulmonary fibrosis and general loss of lung elasticity.

The clinical evaluation of pulmonary function impairment most often was erroneous in patients with arterial oxygen unsaturation in the absence of a significant degree of emphysema and decreased ventilation, when the mean gradient of pressure for oxygen was increased between the alveoli and the arterial blood because of unequal alveolar aeration. It was obvious in this group that clinical evaluation of disability is uncertain without the benefit of pulmonary function studies.

CARDIOVASCULAR SYSTEM

The principal disturbance in the cardiovascular system of patients with anthracosilicosis is the development of chronic hypertension in the pulmonary circulation. This results in a gradual hypertrophy of the right ventricle with eventual heart failure. Right sided heart failure is manifested clinically by an elevation of the venous pressure and a prolongation of the circulation time.

In frank heart failure, the diagnosis is evident; however, in slowly progressive cardiac hypertrophy pertinent physical signs may be absent. In these instances, electrocardiographic studies may indicate the development of right heart strain (chronic *cor pulmonale).* This diagnosis is based upon the following changes in the electrocardiogram: A deep S wave in leads I and II; a depressed and bowed down RS-T segment in lead III; tall peaked P waves in leads II and III, with inversion of the P waves in the precordial leads (the pattern of *cor pulmonale);* and small

R and deep S waves in the precordial leads. The persistence of a small R wave and a deep S wave in the precordial leads CF_4 and CF_5 has been the most characteristic feature in the present series.

The investigation of factors responsible for the development of right heart strain was undertaken in 148 miners. The electrocardiograms were correlated with the x-rays and tests of pulmonary function. There was no parallel between the electrocardiogram and the x-ray stage of silicosis, for example, in the group of miners classified as having first stage anthracosilicosis, 32 per cent showed evidence of right heart strain while of those with third stage anthracosilicosis 29 per cent had evidence of right heart strain.[4] The correlation with the degree of emphysema was striking. In coal miners with a slight degree of emphysema, no right heart strain was found. With the moderate and advanced degrees of emphysema, 13 per cent and 44 per cent, respectively, showed a right heart strain pattern; of those with far advanced emphysema, right heart strain was noted in 58 per cent. When the incidence of right heart strain was compared with the resting arterial oxygen tension, it was discovered that with the lower resting arterial oxygen tension there was a greater frequency of right heart strain.

TREATMENT

Effective treatment of anthracosilicosis requires careful management of the associated medical and surgical conditions. Disturbances of the upper respiratory tract, the general circulation, the genito-urinary system and the gastrointestional tract must be corrected; otherwise, specific treatment of anthracosilicosis will be ineffectual. Witness the futility of treatment in the presence of mechanical obstructions of the respiratory tract and the unsatisfactory course of bronchiectasis aggravated by impaired drainage. An adequate air passage is essential for the effective use of any procedure designed for treatment of the lungs and, obviously, mechanical obstructions to breathing must be corrected before other methods are instituted. The inguinal hernia which interferes with effective contraction of the abdomen for elevating and controlling the diaphragm, as required in cough, must be corrected surgically or by means of a suitable hernial support; otherwise, necessary evacuation of the dependent bronchi will not be accomplished. Impairment of the feet should not be overlooked, since the handicap of walking uncomfortably will aggravate the dyspnea.

White rest is indicated for disabled miners with advanced disease, undue physical inactivity may become harmful for those who possess some degree of available or potential pulmonary function. Exercise is valuable in maintaining the general health and it facilitates the resolution of intercurrent infection. The extent of exercise should be regulated according to the occurrence of dyspnea, and the pulse and respiratory rates. Increased discomfort and the accelerated pulse and respiratory rates call for limitation of activities; stair climbing and rapid walking, especially against the wind, should be avoided. The coal miner should spend as much time as possible in clean, fresh atmosphere; dust of any type is harmful and should be avoided. Supervised rest is indicated for active pulmonary tuberculosis.

In prescribing drug treatment for anthracosilicosis, it should be remembered that expectorant drugs and sedation in most cases are more disturbing than effectual. In failure of the circulation, digitalis, theobromine derivations and the mercurial diuretics may be employed with some value. With *cor pulmonale* occurring in marked pulmonary fibrosis, digitalis is rarely effective. In general, pressure breathing of oxygen with the use of mercurial diuretics is the most valuable combination.

INTERMITTENT POSITIVE PRESSURE BREATHING (TREATMENT)

Intermittent positive pressure breathing has been used in more than 400 coal miners, 200 having been studied physiologically before the treatments were instituted. This form of breathing causes, in most instances, a lowering of the mean oxygen gradient of pressure from alveoli to arterial blood by providing a more uniform alveolar aeration, particularly in cases without a significant degree of pulmonary emphysema (residual air less than 35 per cent of total lung volume). In addition to this mechanism of facilitating alveolar aeration, intermittent positive pressure breathing promotes bronchial drainage, with increased expectoration during the first seven to ten days after the beginning of the treatment; expectoration usually tapers off to an amount considerably less than that observed at the beginning of the treatment.[5] A further observation pertains to the uniform distribution and remarkable effectiveness of aerosol introduced simultaneously with intermittent positive pressure breathing.

The maximal inspiratory peak pressure used with the intermittent positive pressure breathing is 20 cm. of water, after which the respirator

cycling valve alternates and the pressure returns almost to atmospheric conditions during expiration. Previous studies[6] have shown that the use of this type of intermittent positive pressure breathing does not significantly alter cardiac hemodynamics, the cardiac output being decreased only slightly and blood pressure both in the lesser and greater circulation showing only a slight variation (increase). Furthermore, there is no danger of increasing the degree of pulmonary emphysema[7] from the use of intermittent positive pressure breathing two to four times a day for two to three weeks, or even longer.

Electrocardiographic studies made after prolonged periods of intermittent positive breathing with 100 per cent oxygen and a potent bronchodilator drug revealed no significant changes. However, in several instances when compressed air was used instead of 100 per cent oxygen, depression of the RS-T segments and inversion of the T waves were noted. In one case, the occurrence of frequent premature contractions of auricular and ventricular origin was noted.

With direct fluoroscopy used during intermittent positive pressure breathing, the improved aeration at the lung bases is noted. This test is especially striking in coal miners with marked emphysema and lowered diaphragmatic function. In some cases, it is remarkable that following a course of intermittent positive pressure breathing, translucency of the bases of the lungs is lessened and the diaphragmatic movements are accentuated, indicating a reduction of "trapped" or residual air. The lymphatic flow may be affected to some extent. Drinker[8] has demonstrated in the dog that lymphatic flow is noticeably increased under the influence of intermittent positive pressure breathing, which therapy is probably responsible for the clinical improvement noted in pulmonary edema.[9] Intermittent positive pressure breathing also provides a form of breathing exercise which is particularly valuable in anthracosilicotic persons, who usually acquire very poor breathing habits (especially of the shallow type with inefficient respiration). The intermittent positive pressure breathing improves apparently the tone of the respiratory group of muscles. The apparatus is conveniently arranged for simple and accurate manipulation.* The accompanying photograph (figure 1) illustrates the intermittent positive pressure breathing apparatus (Barton model) in which compressed air and varying percentages of oxygen or helium with nebulization may be employed. The other photograph (figure 2) illustrates the apparatus using oxygen only.

The use of intermittent positive pressure breathing of oxygen combined with the simultaneous administration of a bronchodilator aerosol (vaponefrin, isuprel, epinephrin or neosynephrin) has provided the most effective symptomatic treatment to date for patients with anthracosilicosis. With the present regimen, the administrations are given two to four times daily for periods of twenty minutes each, while the miner sits in a chair. Oxygen is used in concentrations of 100 per cent, and the dose of bronchodilator drugs is .3 to .5 cc. In a few instances, continued helium (70 per cent) and oxygen (30 per cent) have been used in asthmatic states, with the theoretic consideration that the helium will carry effectively the oxygen into the obstructed alveoli. Compressed air alone has been used in a small number of cases with moderately advanced anthracosilicosis.

The method of intermittent positive pressure breathing obviously is not a cure for anthracosilicosis, but in about 60 per cent of the advanced cases definite symptomatic relief can be expected when 100 per cent oxygen is employed; improvement in pulmonary function in the less severe types permits the miner to return to work. In the latter group, it has been found advisable to provide one treatment daily before or after work. There apparently is no advantage in the use of compressed air alone, except as an economic factor. It may be employed with oxygen in about 50 per cent concentrations, but the results are not always comparable with those obtained by the use of 100 per cent oxygen. Present experience indicates that the use of the bronchodilator drug in intermittent positive pressure breathing is inadvisable when compressed air alone is employed.

DIAPHRAGMATIC ELEVATION

A preponderance of abdominal movements in breathing is characteristic of advanced anthracosilicosis. At first it appears helpful in moving air in and out of the lungs during respiration. As abdominal breathing becomes a requirement or a habit, the vertical excursions of the lungs are accentuated, the horizontal movements lessened. While less activity occurs apically, the bases become overactive, stretched and distended. With progressive emphysema, the diaphragm is lowered and reduced in function, dead air accumulating in the bases. Accordingly, the initial value of compensatory abdominal breathing is lost. The miner finds that forceful

*The apparatus is manufactured by the Mine Safety Appliances Company, Pittsburgh, Pa., and V. Ray Bennett, 8154 Beverly Blvd., Los Angeles, California.

contraction of the abdomen alone fails to give relief but that pressure exerted over the abdomen may be helpful.

It has been observed that abdominal compression as obtained from wearing a special type of abdominal support will elevate the diaphragm, sometimes to the position of expiration.[10, 11] In the higher range, movements of the diaphragm are more effective physiologically. In not a few instances, there is a striking improvement in breathing, and a reduction of cough, due perhaps to the facilitated movement of air in and out of the lungs. In combination with intermittent positive pressure breathing, there apparently is improved aeration and drainage of secretions from the dependent parts of the lungs. The most favorable results are obtained in miners with a well developed abdomen and a moderate degree of generalized anthracosilicosis.

CONCLUSIONS

1. The pathologic, clinical and physiologic aspects of anthracosilicosis are discussed, with special reference to the occurrence of dyspnea.

2. The frequent disproportion between the symptoms, physical signs, x-rays and the physiologic tests is noted.

3. Factors involved in the disturbances of pulmonary function are mentioned.

4. The favorable effects of intermittent positive pressure breathing and diaphragmatic elevation used in symptomatic treatment are reviewed.

5. The importance of general medical care, with surgery when indicated, is stressed as a means to relieve physical disability that may interfere with the symptomatic treatment of anthracosilicosis.

Note.—We appreciate the valuable suggestions of Dr. R. R. Sayers pertaining to the mechanism of intermittent positive pressure breathing and its application.

REFERENCES

1. Gough, J.: Pneumoconiosis in Coal Trimmers, J. Path. & Bact. 51: 277, 1940.
2. Theodos, Peter A., Gordon, Burgess, Lang, Leonard P., & Motley, Hurley L.: Studies of Disability in Anthracosilicosis. To be read June 5, 1949 before the meeting of the Am. Col. Chest Phys., Atlantic City, N. J.
3. Motley, Hurley L., Lang, Leonard P., & Gordon, Burgess. Pulmonary Emphysema and Ventilation Measurements in 100 Cases of Anthracosilicosis, Am. Rev. Tuberc., 59: 270, 1949.
4. Lang, Leonard P. & Motley, Hurley L.: Electrocardiographic Findings in Anthracosilicosis, Fed. Proc. 8: 91, 1949.
5. Motley, Hurley L., Lang, Leonard P., & Gordon, Burgess. Use of Intermittent Positive Pressure Breathing Combined with Nebulization in Pulmonary Disease, Am. J. Med. 6: 853, 1948.
6. Motley, Hurley L., Cournand, A., Werko, L., Dresdale, D., Himmelstein, A. & Richards, D. W., Jr.: Studies of Intermittent Positive Pressure Breathing as a Means of Administering Artificial Respiration in Man, J.A.M.A. 137: 370, 1948.
7. Motley, Hurley L., Lang, Leonard P, and Gordon, Burgess: Total Lung Volume and Maximal Breathing Capacity (MBC) in Pulmonary Emphysema after Repeated Periods of Intermittent Positive Pressure Breathing (IPPB), J. Aviation Med. 19: 346, 1948.
8. Drinker, C. K.: Pulmonary Edema and Inflammation, Cambridge, Harvard University Press, 1945
9. Motley, Hurley L., Werko, Lars., Cournand, Andre, & Richards, D. W., Jr.: Observations on the Clinical Use of Intermittent Positive Pressure, J. Aviation Med. 18: 417, 1947.
10. Gordon, Burgess: Results of Abdominal Compression in Pulmonary Tuberculosis, Am. Rev. Tuberc. 35: 1, 1935.
11. Gordon, Burgess: The Mechanism and Effects of Abdominal Compression in the Treatment of Pulmonary Tuberculosis, New England Med. J. 214: 195, 1936.

THE DOCTOR'S OBLIGATION TO HIMSELF

The doctor no longer can content himself with doing only his scientific job. The implications of science in today's world are such that its power must be used for social good lest its evil potential destroy us all. The doctor's new social role must be positive but it must also be convincing to the several groups involved. It must be mutually helpful and mutually determined with these groups.

Therefore the energies of the individual must not be dissipated in fighting his brother as to method. There must be concerted teamwork to do the job. Thus it is that today's doctor is obligated over and above his professional duties to understand his relation to the rest of the social order, to take real pains to educate himself in these broad fields where he must also work. To fail in this duty as individuals is to insure failure of the profession to do its best job, and therefore to insure its degradation.—D. S., in Medical Annals of the District of Columbia.

IMPROVED CANCER TEACHING

Certainly the best place to teach doctors to recognize cancer is in the medical school. In the past cancer has been presented to the student piecemeal and according to the whim and personal interests of individual faculty members.

In an attempt to integrate the presentation of cancer to the medical undergraduate, the National Cancer Institute has offered grants of from $10,000 to $25,000 per year to each medical school for the purpose of improving cancer teaching. To date 42 schools have accepted such grants and 21 others state that they are currently preparing teaching plans in order to utilize grants effectively.

It is truly a remarkable tribute to Yale University School of Medicine that its foresight in the early acceptance of the cancer teaching grant and its exemplary plan for coordinating the teaching of cancer has provided signal leadership in this important development. —Chas. S. Cameron, M. D., in Supp. to Conn. St. Med. Journal.

THE APPROACH TO THE X-RAY FILM*

By KARL J. MYERS, M. D.,
Philippi, W. Va.

X-ray studies constitute one of the most important diagnostic aids in any branch of medical practice. Courts have held that neglect to make x-ray studies of a fracture or of a possible fracture may constitute malpractice. Even laymen now understand that a diagnosis of tuberculosis or, for that matter, a statement that the patient does not have tuberculosis, depends so much on x-ray that an examination for suspected tuberculosis is inadequate without an x-ray film of the patient's chest. The routine use of x-ray examinations in fields additional to those in which they are now ordinarily employed awaits only a fuller appreciation of the value which they have in the solution of our diagnostic problems.

However, the medical curriculum is so crowded that too often little attention is paid to the fundamentals upon which a correct x-ray interpretation must be based, and the student is graduated from medical school without being equipped to benefit from the immense help which properly made x-ray studies can give.

Conversely, sometimes the student has not been sufficiently impressed with the limitations of the roentgen examination and so looks upon the x-ray film with a kind of superstitious awe, expecting of it miracles which it is not adapted to give, or reading into it his clinical findings and seeing in it corroboration for his unfounded presuppositions.

X-ray diagnosis at its best is the result of the intelligent cooperation of a team. The clinician should study the film with the radiologist, and both should have at their command the history, the results of the physical examination and the laboratory procedures which are necessary in a given case. The radiologist, of course, should not read into the film what the clinician or laboratory has told him. He should report factually what he sees, but in his interpretation of these facts, the history, the physical examination and the laboratory reports all play an important role. The radiologist is, after all, a consultant, and as a consultant he is entitled to know all of the facts about a case before making up his mind. The judge who decides the case on only part of the evidence may sometimes be wrong.

In dealing with the x-ray film, one should remember that it is a photographic record of the varying densities through which the roentgen rays have passed or in which they have been absorbed. In many ways, it is like the shadow pictures one makes to amuse children. It deals in silhouettes and cannot reveal microscopic structure; magnification of the film image results only in magnifying the silver granules. The study of cell types is, therefore, beyond the possibilities of the x-ray method, and the same applies to micro-organisms and to changes in the body chemistry and physiology except in so far as these produce gross changes in the outlines of the organs or other structures.

Each of us is constantly trying to improve his diagnostic and therapeutic results. If we are to better our results from x-ray studies, we must do so along certain lines which I shall try to outline in this paper along with some pitfalls which must be avoided.

First, we must have the best possible films. The technical part of the x-ray examination cannot be safely divorced from the interpretation. Films of the highest diagnostic quality are necessary, since even the most expert radiologist cannot obtain information which is not on the film. This calls for well trained and astute technicians who know how to achieve not only the maximum of detail, contrast and definition, and the minimum of distortion, but who know also how to employ these special technics which in so many cases are necessary to demonstrate pathology.

Fractures may be missed because the technician has not made the exposures properly; likewise, the separation of fragments may be distorted, appearing either wider than is actually the case or appearing to override, merely by changing the angle at which the film is taken. I once heard a technician tell a doctor that he could set the fracture without touching the patient, and it would be perfectly possible for him to do just that in so far as the appearance of the fracture on the x-ray film is concerned.

Apparatus of sufficient capacity and flexibility to make chest films at 1/10 second or less, and including fine focus or rotating anode tubes, is necessary to produce the best films; but a good technician is more important still. A good technician often can produce films of diagnostic quality even with inferior equipment, but a poor technician cannot produce good films even with the best equipment.

The importance of a knowledge of the normal roentgen anatomy and physiology and of the congenital and age variations which may be considered within normal limits cannot be emphasized too strongly.

*Presented before the Fayette County Medical Society, at Oak Hill, West Virginia, November 2, 1948.

It seems difficult for some physicians to say the word "normal". It must be realized that there are many borderline variations which do not have any pathologic significance. Also, it is true that a negative report often entails a great deal more study than the discovery of gross or obvious pathology.

Errors in interpretation often occur because of the lack of systematic study of the film. The radiologist and, more especially, the less experienced observer, should have a definite routine for studying each type of case and should follow this routine religiously. For example, in the study of the chest fluorscopy may be invaluable, demonstrating at once any gross lesions in the lung fields and permitting study of the size and proportional measurement of the cardiac silhouette and of possible encroachment upon the retrocardiac or retrosternal spaces. Any abnormalities of the movement of the diaphragms and cardiac silhouette should be carefully studied. With this information in mind, we may center our attention upon the film following substantially this routine:

1. Exposure factors. Kind of study, available views, distance, position, et cetera. Density, detail, contrast, illumination, et cetera.
2. Thoracic cage, including as much of the shoulder girdles as may be visible on the film; as much of the spine as may be visible, and each rib separately. Deviations from the normal in size, shape, contour and relationship and in detail of the bony structure should be looked for.
3. Cardiac silhouette, with especial attention to any evidence of generalized or chamber enlargement.
4. Central densities. Any deviation from the normal pattern of the hilus noted.
5. Lung fields: abnormal lung markings, calcifications, infiltrations or other abnormal shadows. The study should begin with the apices, and the two sides should be compared as we progress downward until the costophrenic angles are reached.
6. Diaphragms and subdiaphragmatic regions.

Perhaps more than one film may be necessary and this is especially true if there is any suspicion of pathologic change in the area behind the diaphragms which may be concealed in routine projections. Lateral and oblique views are often required. Stereoscopic films may be helpful and films made after the use of lipiodol or other special technics may be necessary.

Standard texts should be consulted for routines for studies of other parts of the body but for each the observer should have a definite outline which will not omit any aspect of the film. All of the film should be studied carefully and one should not fail to look in the corners of the films. I once heard a radiologist say that one of his students had failed to make a diagnosis only because he neglected to look in the corner of the film where the diagnosis was carefully written in white ink.

Several years ago, I saw a surgeon hold an x-ray film before a class of students and tilt his head up and down as if intently studying the lumbar spine. Every single student found something wrong with the spine but none saw any of the multiple fractures of the pelvis which was the only pathologic change present. The surgeon snorted, "A foolish and perverse generation seeketh for a sign." Too many still look for signs.

Probably the most important thing which I can urge upon you is an analytical study of the film. A very widespread misconception is expressed in the phrase "x-ray picture". The roentgenogram is not a "picture." It has, projected on one plane, all of the shadow densities cast by a three dimensional object. It is, thus, far more like an architect's blueprint, and I am convinced that we are going to have to train ourselves to use the proper concept of what the film really represents and to employ the proper terminology ("x-ray studies", "x-ray films", or "roentgenograms") before we are going to progress very far in improving our results. One needs to think of the three dimensions of the part surveyed every time an x-ray film is studied and not just when stereoscopic films are employed. He must "see" in his mind the three dimensions on every film.

Unfortunately, it is a rather common practice to look at a film and try to remember where we have seen something like it before. Instead of making an analysis of the roentgen data on the film and trying to arrive at a reasonable conclusion therefrom, the tendency often is to attempt to remember a number of "typical" films and to try to fit the film under study into one of these remembered types.

The shadows on the x-ray film are not always what they seem to the uninitiated and as a matter of fact, in a great many illustrations which are presented in textbooks, the diagnosis was made not from the x-ray film alone but from other aspects of the case, and the film presented as "typical" might just as well have illustrated some other condition. If the physician relies upon the "typical" film to guide his feet, he must often stumble.

In the determination of roentgen pathology, one must recognize first that there is a deviation from the normal. This abnormality then must be evaluated in terms of the abnormal shadows representing the varying densities through which the x-rays have passed and, finally, the student must make a differential diagnosis between those conditions which could possibly be expected to cause those changes in density and be most likely to be responsible for the shadows under consideration. These roentgen indications of pathology may include abnormal calcifications or decalcifications, changes in illumination, in size, shape and contour of various organs or other structures, and changes in relationship.

The evidence may be either direct or indirect. Many conditions show definite gross pathologic characteristics with respect to origin, type location, course and extent. One teacher of wide experience said that when the origin of the bone tumor was determined, half of the data needed to make the diagnosis was at hand. Be that as it may, the student of the x-ray film needs to list carefully all of the roentgen data that would indicate the origin of the lesion as well as its extent, and tissues or parts involved as well as its distinguishing characteristics.

Having studied the film in a systematic and careful manner and having adequate knowledge of the normal roentgen anatomy and physiology and the roentgen evidences of pathology, the final step in the process of improving oneself in x-ray diagnosis is the careful study of as large a number of films as possible. No substitute has yet been discovered for experience and this experience needs the salutory lessons of the biopsy, the operating room and the autopsy table in order to make us mindful of our weaknesses and our shortcomings as well as our capabilities.

X-ray diagnosis is an essential part of the practice of modern medicine, and this should be thoroughly understood by every physician. Close collaboration of the radiologist with the other members of the medical profession whose skills are brought to bear upon the subject of the patient's illness is called for. It seems difficult for physicians not to be unduly influenced by radiographic findings. The final diagnosis needs to be based upon the study of all available information.

It is often believed that the radiologist has something on the film which can be demonstrated with the certainty of a mathematical proposition. In many cases this is not true, as I have tried to bring out in this presentation; and it is not true for the reason that the radiologist "sees" the film, not only with his eyes, but with his knowledge, his training, his experience, his concepts of anatomy, physiology and pathology, his prejudices and his enthusiasms. It is important to know these inherent limitations of the method and to realize that radiology is an art as well as a science, in order to evaluate its contributions properly and to achieve the full benefit from the x-ray examination.

SUMMARY

1. The value of x-ray studies has been discussed and the need for cooperation between the clinician and the radiologist stressed.

2. The clinician should view the films on his cases and, when possible, attend the fluoroscopy.

3. To improve himself in x-ray interpretation, the clinician should:

a. Know more about the physical and technical factors employed in roentgen examinations and the effects of these factors upon the findings on the films and fluorescent screen.

b. Know more of the normal roentgen anatomy and physiology and of the congenital and age variations which are within normal limits.

c. Know more about the roentgen evidences of pathology.

d. Avoid thinking of x-ray films as "pictures."

e. Have a definite routine of study and follow it systematically and carefully, writing out in detail his findings and conclusions. Nothing stimulates close observation and clear thinking like putting things down on paper.

f. Gain experience in film reading and fluoroscopy.

g. Test his progress by data obtained from biopsy and by attendance in the operating room and at the autopsy table.

BIBLIOGRAPHY

1. Meyer, William M.: Clinical Roentgen Pathology of Thoracic Lesions, Lea & Febiger, 1932, p. iii-v; 27-38.
2. Golden, Ross: Diagnostic Roentgenology, Thomas Nelson & Sons, 1948, p. v-viii.
3. Pillmore, George U.: Clinical Radiology, F. A. Davis Company, 1946, p. xiii-xiv.
4. Templeton, Frederick E.: X-Ray Examination of the Stomach, The University of Chicago Press, 1944, p. 1-3.
5. Pancoast H. K., Pendergrass, E. P., & Schaffer, J. P.: Head and Neck in Roentgen Diagnosis, Charles C Thomas, 1940, p. 3-5.

6. Snow, William: Roentgen Study of the Chest, Charles C. Thomas, 1946, p. vii: 3-6.
7. Rigler, Leo S.: Outline of Roentgen Diagnosis, ed 2, J. B. Lippincott Company, p. vii-viii; 1-14.
8. Lower, W. E., & Nichols, B. H.: Roentgenographic Studies of the Urinary System C. V. Mosby Company, 1933, p. vii-viii; 13-.
9. Archer, Vincent W.: The Osseous System, The Year Book Publishers, Inc., 1945, p. 5-34.

QUALITY OF MEDICAL CARE

In the effort to improve the general quality of medical care throughout the country, the medical schools are realizing the significance of the role they must play. This concept has been clearly expressed by the chairman of the Council on Medical Education of the American Medical Association and by the secretary of the Association of American Medical Colleges. In their emergence from the isolation of the last century, the schools developed close relations with universities and teaching hospitals. Now, such affiliations are beginning to extend to public health and social agencies, to smaller hospitals and health centers, and to practicing physicians in the surrounding area.

If improved quality is to accompany the better financing of medical care, and if the influence of the medical schools is to bear on the problem, this new and broader concept of the function of the school must be universally adopted. The basic functions of teaching and research expand to include the concept of service to the community, of active identification with the medical life of the surrounding region. The modern medical center becomes the hub of continuous postgraduate educational activities, of regional medical-service programs reaching to outlying rural areas and of functional relations with all community health facilities. Thus, the quality of medical care may be enhanced throughout the region of the teaching center.—E. R. Weinerman, M. D., in New England Journal of Medicine.

THE PHYSICIAN AND THE BODY POLITIC

In former years more physicians were distinguished in public life than today. The Declaration of Independence bears the signatures of six members of the medical profession, and three signed the Constitution of the United States. Across the years, the pages of history are dotted with the names of physicians here and abroad who have distinguished themselves in political roles.

As recently as some two decades ago, two past presidents of the American Medical Association held cabinet posts. Doubtless the steadily increasing exactions and time-consuming demands of their profession account in some measure for the lack of political activity among men of medicine in the immediate past and at the present time.

Democracy functions, of course, through politics, and the guiding hand of able physicians in the poltical affairs of this nation at this time is a crying need. Wisely enough, the distinguished statesman-physician, Congressman Walter H. Judd, has stressed the need in Washington of "more doctors in government, and, above all, more of the kind of mental habits that good doctors must have."—J. Florida Med. Assn.

PATHOLOGIC CONSCIOUS STATES*

By EDWARD F. REASER, M. D.,
Huntington, W. Va.

Consciousness cannot be accurately defined. In the simplest type of consciousness, which is not dependent upon cortical activity, the organism is aware only of its physical comfort and its only effort for self-preservation consists of crying for food and accepting it when offered. From this level there is a progressive widening of consciousness to the state in which the cerebral cortex is fully functioning and the individual is aware of what is transpiring in his immediate environment, has adequate appreciation of the relationships of individuals and events, is capable of giving attention to any essential change in the situation and is sensitive to stimuli with capacity to comprehend the significance of such distractions. In such a state, the individual is fully aware and cognizant of his relationship to the world in which he lives. In the normal state of consciousness the stream of thought is continuous, and although the individual may become preoccupied with reverie and meditation, he is instantly responsive to external stimuli reaching him through any of the special senses.

Impairment of consciousness may occur in a variety of ways and at various levels. Consciousness is not always obvious. For example, a patient in a state of catatonic stupor appears to be unconscious, yet such a patient is usually aware of what is being said and done about him. It is the purpose of this discussion to consider certain psychic states in which the subject is awake and aware of his existence as a functioning organism, but lacking in comprehension of proper relationships and capacity for logical thinking. Among the numerous terms we find employed in the literature to designate such pathologic states of consciousness are fugue, confusion, clouded state, psychic equivalent, dream state, twilight state and others. We find such variations from normal consciousness in individuals suffering from a variety of nervous and mental disorders such as epilepsy, hysteria, migraine, intoxication with drugs and alcohol, cerebral trauma, organic brain disease, endogenous intoxication and infection and certain types of extreme emotional reaction. The field is so large and varied that it seems best to select a few examples which will illustrate the problems that confront the psychiarist.

Two common characteristics are constantly encountered, namely, amnesia and the ability to carry on complex and apparently purposeful

*Presented before the Southern Psychiatric Association, at Dallas, Texas, December 6, 1948.

activity. While the term "amnesia" is frequently used with diagnostic import as in the case of individual who finds himself unable to recall his name and place of residence, in its proper sense amnesia is significant of loss of memory for past experiences. The period covered by amnesia may be clear-cut with sudden onset, as in retrograde amnesia with cerebral trauma, or it may be wirespread. In the case of affective stupor, there may be loss of all past experiences. In some instances, the period of memory loss is not complete and there are spotty, hazy, indistinct recollections of which the subject is uncertain as to whether such imperfectly remembered events actually occurred or not. Amnesia, as the chief symptom of mental disorder, is the most frequent claim encountered in forensic psychiatry. Unquestionably, it is often feigned. However, there are cases in which acts of violence are committed during pathologically altered states of consciousness, and memory for the event is lost afterwards.

EPILEPTIC CLOUDED STATE

The epileptic, in a clouded state, often becomes violent and destructive. A powerfully-built white male patient, classified as an epileptic with clouded states, revealed that during one of his episodes, in which he was so violent as to require restraint, he believed that the world was coming to an end and that a revolution was going on. His memory was not entirely lost, but it was false in keeping with his delusional experiences.

A 23 year old white man with a history of *grand mal* seizures was arrested and charged with murder after he had reported that "there is a dead man lying up there in the field." The evidence was that the deceased was mending a fence on his farm when the defendant came along and stopped to talk. The defendant stated that the last thing he remembered was talking to the deceased. When he came to himself, he was lying under a tree and he thought that he had been asleep. He saw the deceased lying on the ground nearby with a bloody head wound which apparently had resulted from a blow on the head with a hoe which was lying near the body. No motive for the act was ever developed. The defendant had no previous history of antisocial conduct and enjoyed a reputation of being a well-behaved person. He denied having any quarrel with the deceased, and there was no reason to believe that any quarrel existed. Apparently one or more hours had elapsed between the fatal blow and the report made by the defendant.

It is consistent with our knowledge of the clouding of consciousness which occurs in epilepsy to assume that this is an example of the violence which frequently occurs in epileptic clouding. The epileptic, in his altered state of consciousness, is likely to choke or stab his dearest friend. Such violence is unmotivated.

HYSTERICAL FUGUE

A young man employed by a railroad company was lifting a bar which slipped, causing his head to be thrown against the shoulder of his companion in such a way as to twist his neck. He complained of pain and soreness in the neck and a disturbance of sensation in the left shoulder and arm. He was first placed in extension with weights. He was then referred to a neurosurgeon who found no evidence of herniation of a cervical disc. When seen by the author, he had marked reduction of sensibility to pin prick in all dermatomic areas from the cervical second to the thoracic second inclusive. He told of a recent episode in which he left home to go to his doctor's office to have an insurance form signed. He came to himself in a nearby city without memory of his name or residence, or recognition of his surroundings. He appealed to a taxi driver who took him to police headquarters where his identity was revealed by the driver's license he carried in his pocket. He was returned to his home where he failed to recognize his wife. He stated that it was two days before his memory returned so that he was properly oriented.

This case is rather typical of the hysterical fugue of short duration. The victim wanders about and apparently does not behave in such a way as to appear to be abnormal. We have no way of knowing what transpires in the mind of such an individual during the period covered to the time that he realizes that he has lost his identity. He then may make it known to others and seek to recover his identity, or he may choose to continue his flight.

A middle-aged white man appeared at the author's office with the story that some twenty years before, he had suddenly found himself in another city with no memory of his identity or place of residence. His past was completely blotted out. He assumed a name and obtained a job. He was successful in his endeavors. He built up a profitable business, married, and established a home. He had become a well respected business man under the assumed name. He had recently begun to be plagued by faint and uncertain recollections of people and events associated with his past. He became greatly worried, fearing that he may have fled from some legal

charge or from some obligation. With help, he was able to recall enough to enable him to visit the city of his boyhood and by means of inquiries to find that he had simply disappeared without known cause, and that there was nothing to embarrass him in his past.

The amnesia of the hysterical fugue state is a rejection of the personality. The victim forgets his past experiences. He does not remember where he went to school, although he does not reject the information gathered there. He seems aware of his capacity for work. He does not lose his vocabulary or his skill in reading, writing and arithmetic. There appears to be no impairment of ability to know what is right and what is wrong in ordinary conduct. Having lost his identity, he is content to go forward as he finds himself, assuming a different identity. When memory returns, it is a gradual process of erupting into the stream of consciousness patchy indefinite recollections which often produce much anxiety.

MIGRAINE

Clouding of consciousness is seen in some cases of migraine. Migraine fugues differ from the clouded states of epilepsy particularly in that the patient is unlikely to engage in violence and the memory loss is less complete.

A 28 year old white woman, mother of a child aged nine months, was seen in an episode of delirium. According to the history, she was subject to recurring attacks of sick-headache accompanied by tantrums in which she would leave the house and wander on the streets. On a number of occasions, she had been arrested by the city police who believed her to be intoxicated. After she became clear from the delirium, she revealed that with the onset of headache she became confused. It seemd to her that members of the family were unsympathetic with her or were inclined to mistreat her. Memory for the periods of confusion were uncertain, hazy and spotty. She would clear up fairly promptly. She had no convulsive seizures. The electroencephalogram revealed normal tracings. The frequency of the episodes was interrupted by the administration of a course of intravenous magnesium sulphate.

CEREBRAL TRAUMA

Retrograde amnesia is characteristic of head injury. Memory is lost for a period prior to the actual impact, usually a few seconds, but occasionally longer. The duration of memory loss varies in different cases. Ordinarily, it is complete for the interval. The following case was regarded as a posttraumatic fugue, although there may have been hysteroid components.

A 35 year old mining engineer was struck on the head by a piece of falling slate in the mine where he was superintending installation of machinery. He claimed at the time that he was unhurt but soon thereafter, he disappeared. Ten days later, he appealed to the police in a neighboring city for help, stating that he had lost his memory. His identity was established by means of a credit card which he carried in his pocket. His memory gradually returned to him in two or three days after he was hospitalized.

Gene Tunney has told in some detail of an experience in which he continued to box with sparring partners and to act in such a way as to cause no suspicion that he was mentally clouded. He came to himself the next morning but at first he was disoriented, and for a period of three days his memory was grossly impaired.

Violent actions may occur in a period of posttraumatic clouding. A 38 year old white man with an alcoholic history engaged in a fight with two collectors who came to his home in a surburban section to repossess some furniture. In the fight he received a blow on the head which did not apparently disturb his consciousness. However, he left the collectors standing in the front yard, went into the house, locked the door of his room and fired a shot which was heard by members of his family who were outside. He was found sitting in a chair with one shoe off, with a fatal gunshot wound in the head and with the gun lying beside him. He had evidently pulled the trigger with his toe.

SENILITY AND CEREBRAL ARTERIOSCLEROSIS

Poor memory is typical of the degenerative states resulting from the aging process. It is usually said that memory for recent events is very poor while recollection of remote events is preserved. Actually, memory is poor for all past experiences. Because the individual recalls many of the associations and events of early life which made a particularly strong emotional appeal to him, it often appears that his memory for remote events is well preserved. However, careful checking will usually reveal much impairment. The old person lives in the past and abhors the present. Satisfaction is gained by reminiscences. He may be living in the same house that he has occupied for thirty years and yet he begs to be permitted to go back home or to return to the company of a spouse long dead. In the extremes, we see delirium and complete mental confusion. In the early stages, clouding or confused states may appear as episodes.

The press recently carried reports of the disappearance from his home of a prominent member of the senate and the subsequent discovery

of him in a restaurant which he had been accustomed to patronize in the city. His physician is reported to have attributed the episode to "temporary amnesia". We are led to believe that this is the first instance of mental confusion that has occurred in the life of this elderly man who has atained national prominence. It is fair to assume that it resulted from impairment of the cerebral circulation.

A 74 year old university professor, who was also an ordained minister, was known to cover up his inability to recall the names of his friends and acquaintances by being profuse in his greetings of everyone he met, even though he might encounter the same person he had greeted a short time before. He disappeared from his class room in the middle of the week. When found, he was wandering aimlessly in a nearby city where he believed that he had a preaching engagement. He was later hospitalized for senile dementia.

ALCOHOLIC FUGUES

It is not unusual for a person who has indulged too freely in alcohol to have a period of amnesia for the events of a few hours. This is not considered as indicative of an altered state of consciousness. However, in certain cases, pathologic intoxication follows the ingestion of small or large amounts of alcohol. In some cases, the fugue is suggestive of an epileptic clouded state. The subject may not show incoordination, dysarthria or other evidences of intoxication. He may show extremes of emotion such as anxiety, fear or rage. He may announce his intention to commit an act of violence before he carries out his threat. For this reason, he may appear to observers to be acting with premeditation and logical motivation.

A 32 year old steel mill worker had been drinking to excess for several days. He lived in the same house with an uncle's family. He had had some trouble with the uncle who had given him notice to move. His wife called a physician about daybreak and when the doctor came he was informed that the patient had not slept, that he had claimed to hear his uncle and aunt planning to kill him and "pouring gasoline from a jug" with the intention of burning the house. As the uncle was leaving for work, the subject threatened him with a gun and accused the uncle of plotting to kill him. He then wandered around in an excited state for an hour or so before obtaining a rifle and attempting to enter the basement of the house where his aunt was washing clothes. When she shut the door to prevent his entrance, he fired a shot through the door which killed her. As he was being taken into the jail, he kept screaming, "Don't let them get me." When he was examined a few days later, he claimed to have no memory of the shooting.

A 32 year old white man with a history of drinking regularly over a period of years, consuming 16 to 24 ounces of whiskey daily without loss of time from the practice of his profession, and with a history of domestic difficulties and impending separation, came home to find both wife and baby gone and all the milk bottles removed from the refrigerator. He immediately started to drink and he consumed more than a pint of whiskey in less than an hour. He announced his intention of killing his wife, located her at the home of a neighbor and told her, as he dragged or pulled her to their house, that he was taking her into the house to kill her. After firing twelve shots into her body from two guns, he left without coat or hat, drove his car some distance, gave his keys to another man whom he had picked up on the road, and told him that he would have no further use for the car. He disappeared into the forest and when he was arrested two days later, some eighty miles away, he appeared to be in a daze. It is not known how he succeeded in covering the distance, and he claimed only spotty and uncertain memories from the time he found the baby's milk bottles gone until he came to himself in the county jail some days later.

We are always faced with the possibility that the claim of amnesia, in such a case, is a self-serving declaration. Most authorities agree, however, that there are states of disordered consciousness due to alcohol, even though the law does not accord the same recognition of freedom from responsibility when alcohol is involved as it does in other cases. The following is a quotation from a decision of the Supreme Court of Appeals of West Virginia: "A person, whether he be an habitual drinker or not, cannot voluntarily make himself so drunk as to become on that account irresponsible for his conduct during such drunkenness. He may be perfectly unconscious of what he does; and yet he is responsible. He may be incapable of express malice; but the law implies malice in such a case from the nature of the instrument used, the absence of provocation and other circumstances, under which the act is done." The jury may take into consideration the incapacity of the defendant to deliberate and premeditate at the time the act is committed and reduce the degree of guilt from murder in the first degree to a lessor crime. "Upon the question of whether the prisoner is guilty of murder in the second degree or manslaughter, the jury is not permitted to consider the drunkenness of the prisoner at all."

EXTREMES OF EMOTION

Consciousness may be clouded by extremes of emotion. A person may be stupified and rendered incapable of action for a time by fright. Kretschmer discusses a variety of reactions characterized by "primitive discharge of strong emotions unchecked by deliberation and reflection. The psychic tension becomes too high and vents itself like a tornado in the form of an acute crisis, regardless of possible results." He speaks of affective twilight states with clouding of consciousness and subsequent patchy amnesia. He uses the term "short circuit actions" to apply to the conduct of individuals who translate affective impulses directly into action which may be complex and apparently purposeful. He states, "Infanticide by unmarried mothers is, for the most part, a typical short circuit action. Many cases of desertion from the ranks during the war were of the same type." Military psychiatrists tell us that during the stress of combat, a soldier may suddenly start running. If he happens to move toward the enemy and he is not killed, he may emerge a hero. If, on the other hand, he moves in the opposite direction, he may be apprehended for desertion in the face of the enemy. Many of these cases occur as a result of mental clouding and the soldier is later unable to explain his conduct.

Unfortunately, when we see such a case in civilian practice, we usually have no means of determining what actually happened except the statement of the individual involved. The following case would appear to illustrate a "short circuit action".

A middle-aged white man, his wife and daughter, were visiting a club one afternoon. While he was sitting at a different table, another man suddenly struck his wife on the head with a bottle cutting the scalp and causing considerable bleeding. He immediately took her to his car and started home. On the way, he learned from the wife and daughter that the man who struck her did so because she resented his advances. He carried her into the house, placed her on a sofa, went upstairs and obtained a revolver, returned to the club and shot the man who had struck his wife. He later insisted that he had no recollection of events following the revelation that his wife's assailant had previously insulted her. Assuming that his statement was true, we would seem to have in this case an example of short circuit action, complex and purposeful, arising out of an extreme of emotion.

Jacoby quotes from the report of an examiner in the case of a 23 year old unmarried girl charged with infanticide, who claimed amnesia for the act, "The possibility of the occurrence of such transitory mental disorders will be admitted, all the more freely, when we recall that it is by no means unusual for states of mental confusion to be produced by severe psychic shock in persons who have previously been considered healthy."

All defendants at the bar are presumed to be sane unless proved otherwise. The McNaughton rule is generally accepted as the basis for the definition of insanity which is of course, a legal term having no medical equivalent. To establish a defense on the ground of insanity, it must be proved that at the time of the act the defendant was laboring under such defect of reason as to be unable to know the nature and consequence of his action, or to be unable to distinguish between right and wrong. Some states include "the irresistible impulse" as a defense. Most psychiatrists view the plea of "temporary insanity" with considerable distrust.

Amnesia alone is not adequate for the defense. It is essential to consider the quality of the mental state at the time of the act. It is possible that an individual might commit homicide with full awareness of his action and later build an hysterical amnesia to escape the condemnation of his conscience. A known epileptic might commit an act of violence when mentally clear. The psychiatrist needs information which will enable him to evaluate the quality of conscious psychic activity at the time the act was committed.

REFERENCES

Fisher, Charles: Amnesic States in War Neuroses. The Psychogenesis of Fugues. Psychoanalytic Quarterly, October 1949, Vol. XIV, pp. 437-467.

Stengel, E.: On the Aetiology of Fugue States, Journal of Mental Science, October 1941, LXXXVII, pp. 572-599.

Abeles, Milton & Schilder, Paul: Psychogenic Loss of Personal Identity, Archives of Neurology and Psychiatry, September 1935, Vol. 34, pp. 587- 604.

Hammes, E. M.: Amnesia, A Clinical Study, Minnesota Medicine, August 1926, Vol. 9, pp. 456-462.

Gillespie, R. D.: Amnesia. Component Functions in Remembering. British Medical Journal, December 12, 1936, pp. 1179-1183.

Gordon, G. J. & Lawrence, B. G.: Loss of Personal Identity (Amnesia) and Its Role in Organic Syndromes,, Deleware State Medical Journal, June 1941, 13, 106-112.

McConnell, Adams A.: Prolonged Post Traumatic Amnesia, Lancet, February 26, 1944, pp. 273-274.

Kretschmer, Ernst: Textbook of Medical Psychology (trans. by Strauss), Oxford University Press, London.

Jacoby: The Unsound Mind and the Law, New York, Funk and Wagnalls Company.

Singer and Krohn: Insanity and the Law, Philadelphia, P. Blakiston and Sons.

Hopwood, J. S. & Snell, H. K.: Amnesia in Relation to Crime, Journal of Mental Science, January 1933.

DIAGNOSIS AND MANAGEMENT OF COMPLICATIONS OF PEPTIC ULCER*

By HERBERT ACUFF, M. D.**
Knoxville, Tenn.

In any study of peptic ulcer, the ulcer *per se* is of secondary consideration. By and large, the entire problem concerned with peptic ulcer is that of management of its complications and sequelae. I refer to perforation, hemorrhage, obstruction and malignancy. The first three are definite complications of peptic ulcer; the fourth might well be termed a sequela, particularly if on the gastric side.

It is one thing to have a sense of mental security and familiarity with ulcer problems, having full confidence in the theoretic evaluation and perfect familiarity with the etiology, the various theories concerning the acid values, their source, the intrinsic phase, the cephalic phase, the neurogenic theory and the psychosomatic theory; yet it is an entirely different thing when a patient is suddenly stricken with acute, agonizing, epigastric pain and, upon examination, one finds him cold, clammy, with subnormal temperature, a thready pulse, a scaphoid abdomen, and vomiting either gastric contents or blood. The problem then is one of correct and immediate action, without time to recall the various theories and procedures which have been laid down by the many observers.

It is, therefore, the scope of this paper to ask searching questions of ourselves as related to the complications of peptic ulcer and to try to evaluate them from a practical, working viewpoint.

Given a patient just described, as one contemplates the situation, the questions which usually arise are probably in the following order:

1. Is the condition due to a perforated peptic ulcer?
2. Where is the ulcer? Is it on the duodenal side or the gastric side?
3. How shall we manage the acute perforated ulcer?
4. How shall we manage the bleeding ulcer?
   a. Acute, massive persistent,
   b. Chronic, intermittent, recurring.
5. How shall we advise the chronic, sclerosing duodenal ulcer patient?
6. What shall we say to the patient with a proven gastric ulcer?
7. What are the recognized methods by which we diagnose peptic ulcer?
8. Granted a full and complete, yet ineffectual trial at medical management, what operative procedure shall we adopt in duodenal ulcer? In gastric ulcer?
9. Do we have an alternative treatment for gastric ulcer?
10. When shall we do vagotomy?

Reverting to question number 2, namely, where is the location of the ulcer, we are concerned as to whether the ulcer is on the duodenal side or on the gastric side. Experience has taught us that duodenal ulcer occurs perhaps in the ratio of one to fourteen as against one to four on the gastric side. It is much more frequent than gastric ulcer, is seen predominantly in men, and the complication of hemorrhage is greater in duodenal ulcer. Gastric ulcer is of longer and more insidious duration and at the same time more persistent. The walls of the surrounding stomach are thicker, more indurated, more edematous, which may well act as a reducing medium to the size of the blood vessels and therefore a restricting influence upon hemorrhage.

It has been my observation that most of the duodenal perforations are in the second portion; the escaping contents will gravitate along the right side of the peritoneal cavity, and pain will radiate to the area of the tenth rib posteriorly and to the iliac region. Tenseness on the left half of the abdomen is almost immediately recognized in gastric perforation but comes a little later in the picture with duodenal ulcer perforation.

Duodenal perforation appears to give the symptoms of acute gall bladder disease. However, the symptoms of acute gallbladder perforation are somewhat more pronounced than those of perforation of a gastric ulcer. Either, however, is an abdominal catastrophe which is dramatic in suddenness and severity and which calls for immediate differentiation from at least six other acute abdominal conditions which are typically fulminating and equally serious.

We now find ourselves at the bedside of the patient trying to evaluate the problem at hand. This is one time when immediate diagnosis is imperative. It cannot be taken under advisement. If the patient is to have even a fair chance to recover, diagnosis must be made and operation performed within a few hours after the occurrence of the perforation. Mortality even with the aid of the newer antibiotics, rises rapidly after the first two hours following the perforation of an abdominal viscus.

In peptic ulcer, one remembers that the crisis begins in the upper abdomen. History may be obtainable as to previous dyspepsia, indigestion, et cetera. Ulcer perforation is further suspected by the presence of epigastric pain with shoulder

*Presented before the West Virginia Section of the Southeastern Surgical Congress, at Huntington, West Virginia, September 3, 1948.
**From the Department of Surgery of the Acuff Clinic.

radiation, shock, collapse, abdominal rigidity, vomiting, diaphragmatic immobility and disproportionate tenderness upon vaginal or rectal palpation.

If x-ray is available, after a short time, flat survey film of the abdomen may show the dark discoloration from gas situated high in the peritoneal cavity just under the diaphragm.

Is the condition due to acute perforative appendicitis? Here you would have the same history of indigestion, constipation, et cetera. The abdominal pain and rigidity are not as intense. The pain is more likely to be paroxysmal. There is a normal liver dullness, and diaphragmatic movements are present. In perforated ulcer, these movements are arrested and fixed.

The area of greatest pain and rigidity is in the lower right quadrant. Tenderness upon rectal palpation may be present, intensified on the right side, but not immediately marked on the left side. In ulcer the tenderness is equal on both sides. Shoulder pain is absent and x-ray examination is negative. In appendicitis the area of greatest pain and rigidity is rarely above the umbilicus, but in perforated ulcer the maximum point is in the epigastrium.

Is the condition due to acute mechanical intestinal obstruction? In this condition we remember that peristalsis is actively increased. There is marked paroxysmal pain as against a steady pain in ulcer perforation. There is an absence of or diminished leukocytosis in early stages. There is also marked diaphragmatic spasm with abdominal rigidity between paroxysms.

In complete obstruction, one looks for the reverse peristaltic wave which is pathognomonic of complete obstruction while in perforation, the abdomen may be quiet. There is general abdominal rigidity with terrific and continuous pain. In obstruction, the vomiting is persistent and quickly becomes fecal. The liver dullness is not obscured and radiography demonstrates gas in the small intestine but not under the dome of the diaphragm.

Is the condition due to an acute cholecystitis with or without perforation? Here again the history of former similar attacks and spontaneous recovery may be obtained. The character of the pain is different. In acute cholecystitis the radiation pain is commonly to the right scapula; the rigidity, tenderness and diaphragmatic spasm are not as marked. Vomiting is usually persistent, however, and the fever is high. Jaundice is a valuable symptom when present and urinary biliary retention is always present. The point of greatest tenderness is over the gallbladder, and remains there. Evidence of tenderness on rectal or vaginal palpation is absent. Acute cholecystitis does not cause the agonizing pain, nor is it accompanied by the marked degree of shock as seen in the perforation of either duodenal or gastric ulcer.

Is the condition due to passage of gallstones? In such a condition the pain is agonizing but again it is paroxysmal. Occasionally, it radiates to the epigastrium or chest, but most often to the right scapula. The phrenic shoulder pain of ulcer perforation rarely if ever occurs with cholelithiasis. Tenderness is greatest over the gallbladder and Boas point and is absent upon rectal palpation.

We must also think of a diaphragmatic pleurisy on the right side. Elimination of this complication may be obtained by the history of a cough, cold or chill. The patient's face is flushed, the skin is dry, the alae nasi are working, the respiration is hurried, of the grunting type; friction rub, rales and diminished breath sounds may be heard over the base of the lung. Leukocytosis is present from the beginning. The abdominal rigidity is not constant; it disappears between inspiration and expiration. Vomiting seldom occurs.

Is the condition due to coronary occlusion with infarction? In this acute episode, abdominal rigidity and diaphragmatic spasm are absent or negligible. There is no tenderness upon rectal palpation. The pain is dull, vise-like, continuous, radiates to the shoulders, particularly to the left, and to the back of the neck and the arms. The maximum intensity is in the precordial area. The heart sounds are feeble and distant. The patient may be made more comfortable with his legs extended. There is usually no vomiting. The patient may be relieved by hot drinks. Electrocardiographic tracing when available is usually confirmatory.

Is the condition due to rupture of ectopic pregnancy with massive hemorrhage? Here there may be a history of menstrual irregularity. If the patient is a woman in the childbearing age, the presence of secondary signs of pregnancy is helpful. The pain is situated low in one of the quadrants of the abdomen.

Vaginal examination may reveal softening of the cervix, some enlargement of the uterus, and an exceedingly tender pelvic mass. In hemorrhage there is usually dullness to flatness on percussion of the pelvis and flanks. Aspiration of the pouch of Douglas is valuable, not only in confirming the suspicion of blood in the pelvis, but the rupture of a pelvic abscess as well.

Are we dealing with acute hemorrhagic pan-

creatitis in contradistinction to perforated peptic ulcer? In this condition, the patient is almost always of middle age and somewhat obese. There is usually a history of biliary tract disease and alcoholism. The pain is terrific, agonizing, shock-producing, radiates to the left hypochondrium, to the back and to the left shoulder. There is characteristic cyanosis with profound shock. There is a distinct presence of tenderness and resistance upon palpation over the pancreas in the left loin. There is a peculiar facies which one, once having seen it, shall not forget, and that is the peculiar slate-gray cyanosis seen in acute pancreatitis. This condition is the only one of the acute abdominal episodes in which the pain and tenderness in the loins and in the costovertebral angle remain extreme. Vomiting is usually persistent. X-ray is of little value. Fasting blood sugar tests and increase in urinary diastase are of differential diagnostic value.

If one can demonstrate flatness and dullness in the left upper quadrant and cares to aspirate the fluid, the presence of a brownish-red fluid is strongly suggestive of acute pancreatitis. This condition is rapidly fatal.

The responsibility of a correct diagnosis is a tremendous one. It must be accurate, precise and quickly made with the immediate institution of appropriate treatment.

We, as surgeons, must accept with chagrin the fact that more than one thousand people per month are dying from the complications of hemorrhage, perforation and obstruction of peptic ulcer. Ulcer and its complications ranks tenth as the cause of death and twelfth as the cause of days' work lost among the income-producing population of our country. Since 1900 the death rate from this disease has increased from 2.7 persons per 100,000 to 6.8 persons per 100,000, according to the last available statistics in 1945.

Whose responsibility is the correction of this more or less appalling situation? Our medical friends have worked with peptic ulcer, antacids, diet, et cetera, for centuries, and yet our mortality and incidence are increasing. It was Dr. H. P. Dean in 1894 who dared to open the acute abdomen, recognized a perforated peptic ulcer and closed it. To his daring intrepidity surgery owes a great debt of thanks. This you will note is approximately one-half century ago, and much more has already been accomplished than was done by mere medical management in three or four times the same period of time.

There is considerable controversy at the present moment regarding the operative procedures for perforation and hemorrhage. I believe all of us are convinced that perforation of the peptic ulcer in either location should be closed at once. We are not all agreed that hemorrhagic conditions resulting from ulcer should be treated surgically.

In the perforation, what is the procedure of choice? To my mind, under spinal anesthesia, or even under sodium pentothal with ample curare for adequate relaxation, the abdomen is opened in the midline, the problem quickly evaluated, adequate aspiration of the leaking contents done, the perforation quicky located, and if marked edema exists around the perforation, pursestring suture is only futile. It is here that a plug of omentum may be fitted into the opening and stitched carefully to the contiguous tissues, the peritoneal cavity thoroughly washed with saline solution, the antibiotic preparation of one's choice instilled into the abdomen, and closure effected in the usual manner. It is desirable to introduce a Levin tube through the nose for purposes of decompression and drainage.

One other word regarding the omental plug. It is, of course, more desirable if accessibility can be obtained, to leave the plug attached to the parent omentum on account of its blood supply. However, it rapidly obtains its blood supply from the surrounding tissue to which it quickly and instantly adheres and thus effectively plugs the crater. In this way there is not so much danger of peristaltic movement pulling the plug away as is the case when it is attached to the parent omentum.

Supportive treatment, of course, is instituted intravenously and feeding is begun on the third or fourth postoperative day.

What shall we do with the complication of hemorrhage in peptic ulcer? I am thoroughly convinced that surgeons have not kept faith with the bleeding individual to the same extent that they have with the perforated patient. As surgeons we recognize the control of blood in any other part of the body is by immediate action, determining the source and ligating the vessel. In bleeding ulcer, we are prone to stand hopefully by assuming a watchful waiting attitude while the blood slowly ebbs away from our patient.

A few basic facts we must remember. If the individual is over forty-five years of age, there is an appreciable arteriosclerosis present. The vessels, therefore, have less retractability, and this greatly interferes with the mechanism by which hemorrhages are controlled. Intravenous fluids, transfusions, et cetera, while replacing the lost fluids, many times dislodge the temporary clot formation and start the hemorrhage again.

We must remember too that the blood supply of the stomach is necessarily rich. It comes from

the coeliac axis which is close to the terrific force of the abdominal aorta. The blood supply is rather constant. We know the gastric branch follows the lesser curvature and anastomoses with the pyloric branch of the gastroduodenal artery. We know that the greater curvature is supplied mostly by the right gastro-epiploic which is derived from the gastroduodenal artery.

We know that the venous blood supply from the stomach returns through companion veins to be collected by the portal system. Therefore, with a correct knowledge of the anatomical arrangement and with the abdomen opened and the ulcer identified, the perforated opening may be quickly enlarged, and the vessel often apparent can be immediately ligated. If retraction has occurred, a mattress suture may be placed posteriorly to the point where the bleeding is noted without any fear of localized ischemia and death of the part due to compensation by the rich anastomotic circulation.

Would we stand idly by while a ruptured ectopic pregnancy continued to bleed? Would we fail to attempt to control bleeding from a hemorrhagic pancreatitis? Would we fail to ligate the carotid vessel in skull fracture with loss of copious amounts of blood? If not, then why should we not assume radical and scientific control of hemorrhage in the stomach and duodenum which are easily accessible to rapid and capable surgery?

In four cases in my own experience, control of hemorrhage has been rapid and not too difficult, results have been brilliant, and the surgeon feels in his own conscience that he has done constructive work instead of assuming a defeatist attitude in regard to a problem which is easily mastered by prompt and skillful operative procedure.

The need for a more constructive program in handling the bleeding ulcer has been emphasized by the statistics collected by Warren and others in which they state that approximately 50 per cent of peptic ulcers bleed to some degree during the patient's life, that 25 per cent of hospital admissions for peptic ulcer have bleeding as one of the admission symptoms, and that approximately 10 per cent of all such admisisons have massive hemorrhage.

Mortality in massive hemorrhages treated by the ordinary methods in vogue today range between 5 and 10 per cent. If these patients happen to be over fifty years of age, this figure will rise to 33 per cent. Mortality following immediate and skillful surgery will be well below 5 per cent. But again, if this patient is permitted to wait until dangerous exsanguination has occurred, the mortality may well be above 20 per cent.

By all of the current statistics one may be able to gather, one patient out of every ten to twelve admitted with massive hemorrhage from peptic ulcer will die. These patients are almost invariably in the older age group. This, if nothing more, should certainly stimulate the interest in early surgery in these desperate ulcer hemorrhages.

Perhaps it is well to discuss the types of procedures which may be done in massive hemorrhage. I recently had a talk with Professor Finsterer of Vienna who was a guest speaker at the International College of Surgeons meeting in Rome. Having been a student of Finisterer's in the earlier years, I have the greatest respect for his judgment, for his intrepid handling of abdominal catastrophes, particularly those related to the gastro-intestinal tract. He states emphatically that if the patient is an average risk and comes to surgery before exsanguination has occurred, subtotal gastrectomy, removing the lower two-thirds of the stomach including the pylorus, is the procedure of choice.

It is an entirely different problem, however, when one finds the ulcer on the posterior surface, penetrating into the pancreas or gastrohepatic ligament. Here the operative procedure is quite too extensive to undertake in these patients. The subtotal gastrectomy may well be done, leaving in situ the base of the ulcer, but being sure by biopsy and pathologic examination at the time of operation that it is not malignant. The remaining crater of the ulcer attached to the pancreas will seal itself over and eventually be absorbed as any other foreign body.

The vessels responsible for most of the hemorrhage are the pancreaticoduodenal and the right and left gastrics.

One may ask the question, should the radical procedure such as subotal gastrectomy be performed when the patient has had considerable hemorrhage? The answer is that once the surgeon has opened the abdomen and found his problem, the bleeding is immediately controlled, even though temporarily by a series of clamps. Then with continued blood transfusions, operation becomes, more or less, one of election and there is no further hemorrhage except that incident to the actual operative procedure.

In summarizing my position on gastric hemorrhage, I wish to say that in patients over forty-five years of age, whose bleeding has perisisted for as long as twenty-four to thirty-six hours, resection by operation is thoroughly and definitely indicated. Practically all of these patients

have had a trial at medical measures. These have failed. Who else but the surgeon can the patient look to for complete and permanent relief?

I very strongly urge subtotal gastrectomy in these cases after the original method of Finsterer and modified by many fine surgeons in later years. I certainly do not feel that the surgeon who operates occassionally on gastro-intestinal procedures should attempt one of these major problems. He should be conversant with the anatomical relations, with the anatomy of the organs involved, with the various surgical procedures, dexterous and moderately rapid in the execution of the operation. These are factors which are conducive to lowest mortality and morbidity.

The procedures just outlined have been stated in particular reference to the acute massive hemorrhage in which it is clear that an erosion has occurred in one of the larger branches of the blood supply.

What shall be our decision in the chronic, recurring type of bleeding ulcer in which the episodes are of rather short duration but recur at intervals of weeks or months? It is the practice of our group, when confronted with these recurring hemorrhages, to institute a logical and adequate medical and dietary regimen. If, after a reasonable length of time, four to six weeks at the longest, hemorrhage continue, it is our practice to advise operative procedure and fashion the operation after a complete survey and knowledge of the condition has been obtained.

What shall we do with the chronic sclerosing type of ulcer with impending obstruction? If the ulcer is on the duodenal side with 50 per cent to 100 per cent obstruction, and if the patient is under forty or even fifty years of age, and otherwise a good surgical risk, I am convinced that subtotal gastric resection is the procedure of choice. If, on the other hand, the patient is a poor risk and over fifty years of age, I am equally convinced that gastro-enterostomy plus vagotomy should be the procedure of choice.

If the ulcer is in the duodenum and adherent to the head of the pancreas, the gallbladder or other contiguous tissues, I am of the opinion that posterior gastro-enterostomy, if the pyloric end of the stomach is sufficiently mobile, would be the ideal procedure. If not, anterior gastro-enterostomy plus entero-enterostomy, with or without vagotomy, would meet the situation satisfactorily.

What shall we say to the chronic sclerosing duodenal ulcer patient? If the gastric residue is less than 25 per cent and the patient is relatively free from gastric distress, I am of the opinion that a dietary and medical regimen should be instituted. Such a patient should be followed at intervals of thirty days to see if the residue in the stomach is increasing or decreasing in amount. If remaining the same, or increasing, then subtotal gastric resection should be done.

I cannot refrain from emphasizing the fact that age forty-five to fifty is the dividing line between safety and questionable surgery as applied to gastro-duodenal operations. We are dealing with an arteriosclerosis and therefore with much more dangerous hemorrhagic tendencies, and in the older age groups we are coming closer to the cancer age which is definitely a consideration, particularly in probable carcinoma and in ulcer of the stomach. Postoperative complications and troubles also multiply above the elective age. Ordinarily in patients of less than forty to forty-five years, postoperative mortality should be between 1 and 2 per cent. In older patients it rises in direct proportion.

Gastric ulcers which are one and one-half to two centimeters in size as demonstrated by either x-ray or gastroscope, and which fail to respond to medical management for a period of four to six weeks, should by all means have subtotal gastrectomy.

The results obtained from subtotal gastrectomy in the hands of competent surgeons are so satisfactory that one does not entertain the fear of postoperative discomfort that formerly attended this procedure. Very few of our patients even have to restrict their diet, they continue with smoking and many indulge in alcohol at their pleasure although this is not advised. They are not the chronic dyspeptics that one normally thinks of, and we feel every assurance that they will not have recurrence of the ulcer and, by the same token, will be spared the dangerous possibility of carcinoma.

The question of diagnosis in the ulcer problem is one of paramount consideration. Unless the radiologist is very astute in delineating the various patterns of the duodenum, he is likely to be misled by the occasional congenital narrowing, nonrotation of the duodenum, persistence of the duodenal mesentery with dragging on the lumen, various deviations as to the length and curvatures of the different portions of the duodenum, et cetera.

X-ray examinations *per se* do not bring these anatomical defects to the forefront. Rather, they

must be done by a competent radiologist under fluoroscopy. This is equally true in gastric lesions. Distortions of the gastric pattern may be made by gallbladder adhesions, cholecystoduodenal adhesions, chronic pancreatic enlargement, extrinsic tumors, et cetera.

I am of the firm belief, and therefore practice, so far as is possible, the use of a competent triad of diagnosticians in formulating the diagnosis and plan for procedure in gastroduodenal surgery. I believe a competent radiologist, a well trained internist and a competent gastro-enterologist, all working together, will result in the greatest number of correct diagnoses.

Abrahamson, Hinton and others have stated that x-ray examinations should be accurately diagnostic in as high as 90 per cent. In this connection, it is only fair to say that the roentgenologist has become superior to the clinician in diagnosis of gastric and duodenal lesions.

There are certain mileposts in diagnosis by x-ray and fluoroscope which are of convincing value. These are the constant filling defects, the absence of peristalsis in the pyloric end and rapid emptying time in lesions which have produced a tubular or channel type stomach but which may not be completely obstructed. Pedunculated or sessile polyps, leiomyomata and other tumors of the stomach wall may be correctly demonstrated by a competent radiologist.

The use of the gastroscope in well trained hands is a most valuable adjunct in our armamentarium of diagnosis of gastric lesions. One can recognize the size of the ulcer, the induration surrounding the crater, the lack of peristaltic waves along the lesser curvature, and can at weekly or bi-weekly intervals check the progress on medical management of increase or reduction in size of the ulcer crater.

The gastroscope will, I believe, in the hands of one competent to make interpretations, soon become as commonplace in the diagnosis of upper gastro-intestinal lesions, as is the procto-sigmoidoscope in the study of colon and sigmoid lesions.

Gastric analysis in these cases is of not too great diagnostic value for the reason that there is a known hypo-acidity in many people over fifty years of age. It is an accepted fact that hydrochloric acid values in most people begin to diminish from fifty to seventy years of age, and therefore little reliance can be placed upon this factor in patients of that age group. In younger patients, it is definitely of diagnostic significance. Gastric analysis, however, should be a part of every diagnostic procedure, regardless of age. The secretion should be reduced to a sediment and examined for the Boas-Oppler bacillus as well as the diminution or absence of hydrochloric acid.

The cytologic test of Papanicolaou is just now coming into current use and may offer diagnostic significance by reducing the gastric washings to sediment and then searching for the malignant cells. At the present time there are not enough people familiar with Papanicolaou procedures to be of material assistance to the average clinic. It is a time-consuming procedure, and it has been estimated that it requires as much as four hundred hours of a pathologist's time in order to make one positive diagnosis of carcinoma of the stomach or of the cervix uteri in the gynecologic cases.

We necessarily hail the advent of Papanicolaou's cytologic studies with interest and hope that in the not too distant future they may well become one of our good and reliable tests for malignancy, not only in the stomach, but in many organs of the body.

What shall we do with gastrojejunal ulcer? These cases usually are encountered following previous posterior gastro-enterostomies for duodenal ulcer. It is in this type of case that I believe vagotomy has a very definite place in surgery, and yet by no means would I feel that such a patient had been cured by vagotomy only. If the acid values remain high in the gastric secretion, and if persistent pain is associated with the lesion, if the patient should become increasingly nervous, which augments the progress of the ulcer, if he has really joined the category of gastric cripples, I believe the procedure is one of taking down the gastro-enterosotmy, dissecting that portion of the jejunum involving the anastomotic site, and closing same by end-to-end anastomosis.

At this point may I interject that the larger portions of the jejunum may be closed by end-to-end anastomosis, while in the smaller portions of the bowel, side-to-side anastomosis gives better and more dependent drainage and passage of the food column. In such a condition, I think not only vagotomy should be performed, but that subtotal gastric resection after the procedure of Hofmeister should also be done.

Vagotomy is the new and rather challenging procedure for the surgeon in his management of peptic ulcer. It is controversial in the minds of many clinicians as well as many surgeons. It is condemned by many of the gastro-enterologists from a medical point of view, and therefore its value to us must be carefully studied and weighed, not only from the immediate effect

resulting in diminution of the cephalic phase of acid secretion, but upon its remote effects on the pancreas, kidney and other abdominal viscera supplied by the vagus nerve.

This operation performed many years ago by both European and American surgeons was repopularized some few years ago by Dragstedt of Chicago who is still most enthusiastic about the results obtained in the ulcer patient from such an operation. In our own Southland, Dr. R. L. Sanders of Memphis has now performed well over one hundred vagotomies with surprisingly good results. Doctor Sanders, as well as Doctor Dragstedt, is most methodical in his preparation and evaluation of the case to be vagotomized. Both surgeons are impeccable in their work and quite methodical also in the post-operative care.

The Mayo Clinic is trying to evaluate carefully the good and the bad points of vagotomy and have even gone so far as to suggest moratorium on the routine case for a period of five years in order to evaluate the late effects of interruption of the vagus nerve. I think this is fundamentally sound, because we cannot forego the knowledge that the vagus is one of the most important nerves in the human body. It is not only far reaching, but diversified in its innervation of various organs, and should be treated with the respect which it rightfully deserves.

My own series is small, only sixteen cases to date done personally, and possibly a half dozen others done by other members of our staff. We have experienced the gastric dilatation which has been somewhat relieved by the administration of urocholine, and which distention, with foul eructations of gas, obnoxious to the patient and to those near him, has persisted for a period of four to six weeks. In the last half of our series gastro-enterostomy was performed also.

Danger in vagotomy, I believe, lies in the fact that it is such an easy procedure to do in contradistinction to the gastric resection with the rather vast amount of suturing, danger of leak, et cetera. It is, therefore, a temptation to do the vagotomy and hope for results.

In vagotomy *per se* we use a left split rectus incision about ten inches long, place a rather wide retractor covered with Stockinet against the liver and elevate same, bringing into view the left hepatic ligament. This is severed with a pair of long scissors after placing the ligament between the left index and middle fingers, which then brings the operator well upon the esophagus. An opening is made around the esophageal hiatus, the esophagus is pulled down, the identification of the cord-like nerve is easily made on the left side first, and the nerve is then traced to the greater curvature on the front part of the stomach.

The nerve thus identified is clamped low and then again about 2½ inches above the first clamp. We use the third clamp on the distal one-third and remove about two inches of the vagus nerve. Catgut ligature is then thrown around both ends because of the usual small blood supply that accompanies the nerve. When the nerve has been identified, a special curved hook is used to steady it until the clamps are properly spaced. The anterior or left vagus having been severed, the posterior or right nerve is then identified by placing the index finger behind the esophagus. This is the larger nerve and is section as was done on the left side.

As one becomes more adept in these operations, he is able to do them without the so-called Penrose drain, by properly placing the hand of an assistant so as to retract all of the structures which gives perfect exposure to the operative field. Two or three catgut sutures are taken to reunite the hepatic ligament, the abdomen is closed in the usual procedure, and thus the vagotomy is done with facility and marked conservation in time.

There has been no attempt in this paper to go into the various operative procedures from the technical standpoint. It is presumed that only men of experience will be attempting this type of surgery, and those men will have become perfected in their own special technic as is true with surgeons everywhere. My one desire has been to call attention to the fact that the surgeon must be equipped with sufficient information so as to be able to make up his mind immediately regarding the proper recognition and treatment of the six or eight surgical catastrophes with which we are all too frequently confronted, and to emphasize a more radical and intrepid management of massive hemorrhage from peptic ulcer.

BIBLIOGRAPHY

Bockus, H. L.: Gastroenterology, Vols. I & II, W. B. Saunders Co., Philadelphia, 1946.
Bockus, H. L.: Recent Advances in Treatment in Gastro-Enterology, J.A.M.A. January 31, 1948.
Woldman, Edward E., and others: Therapy of Peptic Ulcer, J.A.M.A., August 7, 1948.
Sanders, R. L.: Personal interview
Ivy, A. C. & Grossman, N. I.: Journal Gastro-Enterology, December, 1946.
Thorek, Max & Thorek, Philip: Personal communications.
Ackerman, L. & Regato, J.: Cancer, C. V. Mosby Company, St. Louis, 1947.
U. S. Bureau Vital Statistics, 1940.
Levin, Morton: Department of Health Report, New York State.
Gray, Howard: Massive Hemorrhage from Peptic Ulcer, Collected Papers Mayo Clinic, W. B. Saunders Co., Philadelphia, 1945.
Pullen, R.: Medical Diagnosis, W. B. Saunders Co., Philadelphia, 1944.

COLLEGE OF PHYSICIANS OF PHILADELPHIA

The President's Page

The problem of rural health revolves around a number of sociological problems that can and must be solved in order to provide good medical care for the majority of our citizens.

The problem is not that of medical care alone. The rural areas of our state need better transportation facilities, better housing, better communications, better sanitation, and extension of electric light and power facilities just as they need more and better medical care.

The answer to better rural health cannot be found in any politically controlled compulsory sickness insurance scheme, but it can be found in our present voluntary system of free medicine.

The problem is more difficult to solve in our state because of a definite lack of physicians and other medical personnel. The ratio of physicians to population in the United States is one physician to 710 population, while in West Virginia we have but one physician to 1125 population.

To provide for better rural medical care we need:

1. To increase our supply of physicians and other medical personnel. This can be done only by providing for a complete medical education in our state;

2. To extend public health units so that all counties or groups of counties will have full-time coverage;

3. To provide for hospitalization and medical care while in the hospital through voluntary plans developed by farm organizations such as the Farm Bureau and the Grange;

4. To establish clinics and small hospitals in the rural areas so that laboratory and diagnostic facilities will be available and so that groups of physicians may practice together;

5. To aid deserving and qualified students from the rural areas to complete their medical education upon the condition that they return to their home communities to practice for a minimum of five years; and

6. To encourage physicians to locate in the rural areas by providing loans and subsidies, if found necessary, by the community, county, state or federal government.

Certainly, all the problems that are involved in the solution of rural medical care are our problems. The public expects the medical profession to provide the leadership and the answer. In this we must not fail.

Thomas G. Reed.

President.

West Virginia Medical Journal

Official Journal of
The West Virginia State Medical Assaciatian
302 Atlas Building, Charlestan, West Virginia

Editar

Walter E. Vest, M. D. (1951) ..... Huntingtan

Managing Editar

Mr. Charles Lively ..... Charlestan

Assaciate Editars

W. M. Sheppe, M. D. (1949) ..... Wheeling
Edward J. Van Liere, M. D. (1950) ..... Margantawn
G. G. Irwin, M. D. (1952) ..... Charlestan
R. H. Edwards, M. D. (1953) ..... Welch

Editar Emeritus

James R. Blass, M. D. ..... Huntingtan

Business Manager

Mr. Charles Lively ..... Charlestan

Published monthly on the first day of the month, at Charleston, by The West Virginia State Medical Association.

Original articles are accepted on condition that they are contributed exclusively to the Journal.

Advertising rates furnished upon request. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the American Medical Association.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston 24, West Virginia. Telephone, Capitol 34-625.

MEDICINE AND POLITICS

An editorial writer in a recent issue of Collier's presents a very sane argument to show that medicine and politics, like oil and water, will not mix, and that any attempt at mixing them can only result in the deterioration of medicine.

The writer admits frankly that the proposed compulsory governmental sickness insurance payroll tax wet-nursed by President Truman and Mr. Ewing would actually socialize the doctors, whom he does not blame for objecting to such a procedure. He holds that "individual initiative is as good for medicine as it is for industrial production." He thinks, moreover, that "the American standard of living is the highest in the world because every ambitious child is free to develop all of his capacities and get paid for his services," and sees "no reason to exclude doctors from the benefits of the free enterprise system."

He feels, as do all doctors with whom we have come in contact, that some technique must be developed whereby proper medical services can be provided those Americans who are now unable to afford it, and suggests that Congress create a "truly competent and unpolitical commission with which doctors could in dignity cooperate."

We would suggest that any such commission, and we have our doubts about how "unpolitical" it would be, begin with a consideration of Doctor Reed's President's Page in our last issue. Doctor Reed's analysis of the situation shows real medical statesmanship, and might well be presented to Congress with a request for the enactment of legislation to translate his "suggestions" into the law of the land.

At any rate, it seems to us a great pity that the bureaucratic "do-gooders" sojourning in Washington have never seen fit to go along with the medical profession in the inauguration of a program of health improvement and medical care, including those points upon which there is no divergence of opinion. However, to them it would appear that the medical profession must "eat crow" on compulsory governmental sickness insurance in order to get somewhere with the non-controversial points.

Possibly there may be some change in the Washington viewpoint, but we doubt it. Bureaucrats and politicians see only the number of votes, not the public welfare or scientific advance.

HEALTH OR VOTES?

The address of Dr. George F. Lull before the luncheon at Charleston, on April 27, sponsored by the Woman's Auxiliary to the West Virginia State Medical Association, has brought this editorial comment from the Charleston Daily Mail:

> "Speaking here the other day on President Truman's compulsory health insurance program, Dr. George Lull, the secretary of the American Medical association, reviewed for his audience an astonishing and little known chain of circumstances which goes a long way to explain the tight battle lines drawn over governmental medicine.
>
> "Officially, at least, the point of departure for the President's sweeping program, was the National Health assembly called by Oscar Ewing, the Federal Security administrator, in May, 1948. In attendance at that meeting, in the words of Mr. Ewing's report, were 'more than 800 leaders from every walk of life and from all parts of the country— representatives of the consumers, the professions, the voluntary and professional associations, the organized health services, hospitals, professional schools, universities and research groups . . .' They were expected to study, consult, arrive at such agreements as they could and recommend, which they did. Mr. Ewing thanked them for their unmistakable interest in the public's health, and the meeting adjourned.
>
> "What is so interesting about this assembly is that its members, all of them deeply concerned about the public health and directly and profoundly interested in its improvement, *did not* recommend—it must be emphasized, they *did not* recommend—a compulsory health insurance program. That was Mr. Ewing's contribution. As he freely admits in his report to the President, 'There was no agreement on the question of national health insurance and my recommendatiin of such a program must be clearly understood as in no way expressing the views of the Assembly'."

The Mail says that it is significant that this newspaper, which received a copy of Ewing's

report well in advance of its official release, has not yet received a copy of the assembly's report to Mr. Ewing. "To some," it says, "it may appear that the Federal Security Agency is not so much concerned with what more than 800 leaders from every walk of life think about compulsory health insurance, as it is with propagandizing Mr. Ewing's enthusiastic and possibly uninformed views on the subject."

According to The Mail, we find on the one side 800 leaders doubtful about compulsory health insurance or frankly opposed to it, including doctors and dentists who would be primarily responsible for the public health under any system of medical care.

"On the other side, loudly advocating compulsory health insurance at costs which no one in the administration has yet dared to calculate, are Mr. Ewing, Mr. Truman, and such senators as Claude Pepper, none of whom has ever been accused of political disinterest."

TEAMWORK

The new Rheumatic Fever Diagnostic Clinic established at the Marion County Health Department in Fairmont last February demonstrates the necessity and value of teamwork on the part of individuals, as well as volunteer and professional groups interested in community health.

Such services to the families of a county are offered by professional persons whose skills are carefully coordinated by the county health officer, who serves as administrator of the program. The participating group includes the family physician, child and heart specialists, public health nurses, sanitarians, laboratory technicians, child welfare workers, the medical social worker, and the public health nutritionist.

The aid of school authorities will be sought for a bedside teaching clinic. The local hospital, which has agreed to accept acute cases for treatment at a per diem rate, and women volunteers who give so freely of their time and energy, are also cogs in this important cooperative undertaking.

The medical social worker has a great many interests in caring for the child with a long-term illness, and is especially interested in helping to solve emotional problems confronting a child and his family. Their efforts are centered on returning the child to normal life with as good a mental attitude as possibble.

It is interesting to note that excellent teamwork exists between federal, state and local agencies in the Marion County program.

Funds with which to operate the special service were made available to the maternal and child health division of the state health department by the Children's Bureau of the Federal Security Agency. The program was arranged by the state health commissioner, the director of the division of maternal and child hygiene, and the county health officer. The plans were also approved by the Children's Bureau and the Marion County Medical Society.

THE DOCTOR SHORTAGE

The Charleston Gazette, in its issue of May 11, suggests that the doctor shortage apparent the country over might be solved partly by providing more intensive training and education, as well as by shortening the time required for such training and education."

"That," says the Gazette, "may require year-round attendance of classes in the early stage of the young doctor's education and more and harder work during his training period. Many older members of the profession feel that this is the only way more doctors can be produced—that the time of qualifying be reduced by harder application. Many young people who want to be doctors have to give up the ambition because of the cost of too many years of preparation."

The Gazette believes that the definite doctor shortage in this country is becoming a serious problem that is causing much concern to the medical profession itself as well as to government authorities. This newspaper, in the following observations, develops the thought that the lay public might help alleviate this serious doctor shortage:

> "We are not developing into a nation of hypochondriacs but it is not to be denied that too many persons who have nothing whatever the matter with them are flocking to doctors' offices and taking up time that ought to be reserved for more serious cases. A person can well think himself into false symptoms that he considers important or even alarming.
>
> "Periodic, thorough physical examinations are of great importance. No person can diagnose his own case though his own accurate knowledge of his physical condition would help his doctor a lot when he became really ill. When one is really ill he certainly ought to see his doctor, and as soon as possible. But if his ailment is imaginary he ought not take the time of his doctor that someone else needs badly.
>
> "Get a thorough physical examination at least once, preferably twice, a year and if your doctor finds nothing radically wrong, contrive to live a healthy life and you will thus aid in reducing the doctor shortage."

CAREFUL SELECTION

Advertisers in The Journal are carefully selected. Only those meeting our advertising standards may use the facilities of this publica-

tion. No advertisement will be accepted which, either by intent or inference, might result in misleading the reader.

We suggest that the members of the State Medical Association review the ads in each issue of The Journal, and when an occasion arises to prescribe products featured or to use the facilities offered, it would be appreciated if mention is made of the fact that the advertisement was seen in the West Virginia Medical Journal.

"FOR SERVICE RENDERED"

Philip Morris' tribute to the American doctor, "For Service Rendered," is portrayed in a two-page spread in the front advertising section of this issue of The Journal.

Our members are invited to send for a copy suitable for framing. The copy could well be displayed in the reception room of every member, and we feel sure that patients will read it with a great deal of interest and understanding.

BEWARE BROKEN FLUORESCENT TUBES

Handling of broken fluorescent light tubes has been declared a serious health hazard by Dr. N. H. Dyer, State Health Commissioner. A powder containing beryllium coats the inside of the fluorescent tubes. If this powder gets under the skin, the material may delay the healing of wounds and lead to chronic inflammation and tumor-like growths. In addition, beryllium if inhaled in sufficient quantity, will result in injury to the lungs.

A recent case was brought to the attention of health authorities where a young boy was using a burned out tube as a baseball bat and was cut by the broken particles. The wound that resulted developed a tumor-like growth that would not heal and had to be removed by surgery.

Anyone accidentally breaking a fluorescent tube should be advised to wash thoroughly all exposed areas of the skin and change to non-contaminated clothing. If it is thought that the dust has entered the eyes or any cut in the skin, medical attention should be given immediately.

Great care should be taken in disposing of burned out tubes. The home used tubes should not be put in the household incinerator nor placed within the reach of children. They should be placed in a protective cover, such as a sack, placed under water, broken, and if possible buried.

In disposing of used tubes in industry, full protective goggles and toxic dust respirators should be worn and every precaution taken to prevent the possibility of injury from flying glass or from the inhalation of the dust.

The Bureau of Industrial Hygiene of the State Department of Health points out that there is no health hazard involved in the use of fluorescent tubes for lighting nor in the handling of unbroken tubes.

As a result of recent injuries from the handling of broken fluorescent light tubes, manufacturers are working on a new phosphor to replace the poisonous beryllium. While this will probably solve the problem of disposal of burned out tubes at some time in the future, it should be remembered that there is, in all probability, a large stock of the present tubes and it may be quite some time before the new tubes reach the consumer.

THE POST REPORTS

Britain's National Health Service is not all good, nor is it all bad, according to Associate Editor Steven M. Spencer, who reported on his five weeks' investigation of the plan in the May 14th issue of The Saturday Evening Post. His article, "How Britain Likes Socialized Medicine," is the first of three.

British working men and women have traditionally been less able to pay for medical and dental care than Americans, Mr. Spencer points out. So the result of socialized medicine has been a rush to doctors, dentists and opticians at a cost of $1,200,000,000 a year, most of which comes from general taxes.

Three main functional faults of the plan, Mr. Spencer says, are these: 1) the doctors are being overworked; 2) dentists, opticians and druggists are making too much money; 3) many people are abusing the opportunity to have doctoring without doctor bills.

"Least happy about the whole thing are the doctors," Mr. Spencer writes. "Most of them feel the Labor government forced them to swallow too big a dose of state medicine at one time, and that it now expects them to cure their own economic indigestion. Many are working twice as hard for half or even a tenth as much money as they made before last July 5th, and are being forced to borrow to meet household bills . . ."

The national health service unlocks the door to preventive medicine in Britain, which has the approval of most doctors, Mr. Spencer says. But one doctor pointed out that there isn't time to look for early symptoms with a waiting room full of patients to be treated for late symptoms.

FREE FOR ALL

The Charleston Daily Mail, in its issue of April 26, has this to say concerning the proposed national health insurance bill:

> "By Mr. Truman's own figures, the United States with 190,000 active physicians, has only about 80 per cent of the number required to give everyone adequate medical attention. Since it will take from six to eight years to train the men who might remedy this deficiency and possibly longer to assemble the faculties, buildings and equipment necessary for their instruction, this fact alone might serve as a brake on his federal health insurance program. The fact that it does not affords a fairly reliable index to the practicality of Mr. Truman's plan.
>
> "He urges the congress to set up at once a program for giving everyone all the medical attention they need or think they may need. Although the matter of cost is touched upon only lightly, payroll taxes are to begin at once. Whatever he may get from the service, the citizen is expected to start paying for it immediately. What he may expect from such 'insurance' so long as the supply of trained men remains inadequate to the demands for medical attention is not discussed in Mr. Truman's description of the plan. The omission is typical, and it is especially revealing."

The Daily Mail believes that the trouble with the present system of medical care is that it isn't big enough. There are too few doctors, too few nurses, too few clinics, and too few hospitals. "If Mr. Truman had confined his program to making up the deficit," says the Mail, "a job which might take years under the most favorable circumstances, something might be said for it."

There is no argument either within or without the medical profession concerning the shortage in personnel and facilities.

The Mail believes that Mr. Truman has overlooked the fact that 190,000 physicians can supply only so much medical attention. Concluding the editorial, the writer says that the idea apparently is that Congress can create with sweeping legislation what generations have failed to accomplish with the painfully slow process of education. "It's as if Mr. Truman expected to create the necessary doctors by deputizing them."

DIRECT CAUSE OF DEATH

The Division of Vital Statistics of the State Department of Health has adopted the new death certificate form and formulated rules according to regulation No. 1 ("Nomenclature Regulations—1948"), adopted at Geneva in 1948 by the first World Health Assembly.

The regulations provide for the formal adoption internationally of the Sixth Revision of the International List of Diseases and Causes of Death, as well as uniform procedures in the compilation and publication of morbidity and mortality statistics.

Essential in the adoption of the new international joint causes procedures is the use of the international form of medical certificate. The new standard Certificate of Death introduced this year provides for the inclusion of this form of medical certification.

The primary responsibility rests with the certifying physician to decide which morbid condition led directly to death, and to state the antecedent conditions, if any, which gave rise to this cause with the underlying cause stated last.

The general rule for classification is to select as the cause to be tabulated the underlying condition which was the starting point in the sequence of events leading up to the direct cause of death.

The International List has been expanded to cover causes of illness as well as causes of death. This has been indicated for some time as health authorities need to know the number of causes of a given disease as well as deaths from that disease to control the problem. The procedures for classification of mortality data have been based on years of experience.

Morbidity is far less definite than mortality. The occurrence of death is factual and the number of such events can be counted. An illness, on the other hand, varies from a minor deviation from normal health to the bed or institutional cases of chronic disease. For this reason, a cause of illness is not so easily defined as a cause of death. Furthermore, in many studies on morbidity, it is far more useful to study all the diagnoses involved rather than assign the illness to a single condition.

NOT FREE LIKE A GOOSE

The wild goose, fixed in the cohesive V which carries him south or north in season, has no freedom while in flight. But it is said that when the V descends to about 200 feet above water, whether with or without a signal from the dictator, pandemonium arises among the geese and there is a mass rolling and tumbling from a sheer sense of freedom before they glide down upon the cool water.

If we accept bureaucratic control and take our place in the formation, like a goose, we lose our liberty, but being a bigger goose than our migratory brothers, there will be no coming down to water, no gleeful rolling in the sheer exhilaration of re-won freedom. Even the wild goose accepts compulsion only for a given flight.

It's not work that gets us down, it's the necessities, the coercions, the compulsions. Shall we give up what little freedom we have left, or shall we form our own dry land V and buck the administration team with hope of winning the fight for freedom.—J. Okla. St. Med. Assn.

GENERAL NEWS

HEAVY ADVANCE RESERVATION OF ROOMS AT WHITE SULPHUR SPRINGS

Advance reservations at The Greenbrier for the 82nd annual meeting of the West Virginia State Medical Association, August 4-6, 1949, have been the heaviest ever recorded over two months in advance of a state medical convention. There is every indication that there will be a near-record attendance. There are still plenty of rooms at The Grenbrier and the other hotels in White Sulphur Springs, and every assurance has been given that hotel officials will go all out in an effort to provide satisfactory accommodations for all doctors and their wives who wish to come to the meeting.

With two or three exceptions, the scientific work committee has completed the program. General sessions have been arranged for Thursday, Friday, and Saturday. The sessions on Thursday and Friday will begin at 10:00 A. M. and end at 1:00 o'clock. The Saturday session will begin at 9:30 and end at 12:30 o'clock.

Section and Society Meetings

All meetings of sections and affiliated societies and associations will be held in the afternoon. A complete schedule of these meetings will be printed in the July issue of The Journal, together with full information concerning the program that will be presented at the meetings. Each afternoon meeting will start at 2:30 o'clock with no set time for adjournment.

So far, no special breakfasts, luncheons or dinners have been arranged, with the exception of the annual banquet on Saturday night. It is thought that much valuable time can be saved by having all doctors and their wives dine at the usual hours in the dining room at The Grenbrier and at the Casino.

Registration Fee

There will be a registration fee of $10.00 to help defray the expenses of the meeting. This fee was fixed by the Council when it became known that there are no facilities at The Greenbrier for any exhibits. Registered guests will attend the banquet without extra charge except for The Greenbrier's usual $2.00 per person fee for special events of this character.

Informal Dress

Dress will be informal for all occasions, including the banquet on Saturday evening.

Golf, Tennis, Swimming and Riding

There will be no fees for use of tennis courts, but the daily green fees of $3.00 will be charged for those who play golf. Caddies are paid at the rate of $2.00 for eighteen holes. The swimming pool will be available all three days at seventy-five cents per person.

There are many beautiful trails on The Greenbrier grounds and horses will be available at $3.00 for the first hour and $2.50 for each additional hour.

Arrangements have been made for doctors and their wives to occupy rooms on Wednesday, August 3, through Sunday, August 7, if they so desire.

Hotel Reservations

The Greenbrier rates for the convention remain at $19.00 for a single room with bath, $18.00 for single rooms with connecting bath, and $17.00 per person for twin-bed rooms with bath. These rates include breakfast, luncheon, and dinner. Cottages are available for groups of from six to eight at the $17.00 per person rate.

Rooms may still be reserved at the following hotels in White Sulphur Springs: The Alvon, The Hart, The Pines, and The West Virginian. Rooms at these hotels are available on the European plan.

MAIL TOURNAMENT ENTRIES NOW

Entries for the golf tournament at the annual meeting at The Greenbrier, August 4-6, should be mailed by members immediately, together with their club handicap, to Dr. James S. Klumpp, Chairman of the Golf Tournament, West Virginia Building, Huntington. Tournament play will begin Thursday afternoon, August 4, and continue over Saturday and Sunday, with play being limited to afternoons.

In addition to Doctor Klumpp, Drs. R. H. Edwards, of Welch, and James L. Wade, of Parkersburg, are members of the committee which will handle the golf tournament.

Members who wish to participate in the tennis tournament should mail entries to Dr. John Lutz, Atlas Building, Charleston, chairman of the tennis committee. Tournament play will begin Thursday afternoon, August 4, and matches will be concluded Saturday afternoon. Play will be limited to afternoons during the convention.

Complete arrangements for the tournament will be made late in June, and match play will be arranged at that time.

Drs. S. L. Bivens, of Charleston, and William M. Sheppe, of Wheeling, are the other members of the committee which will handle the tennis tournament.

DR. McLAUGHLIN ON PROGRAMS

Dr. Ralph S. McLaughlin, of Charleston, presented a paper at the Conference on Industrial Opthalmology, held in Pittsburgh, May 16-18. His subject was, "Treatment of Chemical Burns of the Eye." The Conference was sponsored by the Department of Ophthalmology of the University of Pittsburgh School of Medicine and the Industrial Hygiene Foundation at Mellon Institute.

Doctor McLaughlin was also a guest speaker at the centennial meeting of the Medical Association of Georgia, held May 10-13, at Savannah, when he discussed "What the Medical Profession is Doing About Your Eyes."

SOUTHERN PEDIATRIC SEMINAR

The 29th annual session of the Southern Pediatric Seminar, a post-graduate course devoted to "better babies in the south," will be held July 18-30 at Saluda, North Carolina. Accomodations may be obtained by communicating with M. A. Owings, Secretary-Treasurer, Saluda, North Carolina. There is a registration fee of $25.00, and reservations should be made early in order to obtain satisfactory accomodations at the hotels in that city.

Dining Room Promenade at The Greenbrier

SENATOR HOLT ATTACKS SOCIALIZED MEDICINE AT MEETING IN CLARKSBURG

Rush D. Holt, of Weston, former United States Senator from West Virginia, and now a member of the West Virginia House of Delegates, was the guest speaker at an open dinner sponsored by the Harrison County Medical Society, held May 10 at the Stonewall Jackson Hotel, in Clarksburg.

The dinner was attended by nearly two hundred representatives of business and professional groups and clubs in the Harrison County area.

Senator Holt condemned the "something for nothing" medical plan which has been introduced in Congress, and warned that if the current Wagner-Murray-Dingell bill is enacted into law the people will have a government agent between them and the doctor. "Your doctor's time," he said, "would be so taken up with studying government regulations that he would have little time left for the practice of medicine."

The speaker stated that he believes that the plan under consideration would cost from $10 to $12 billion dollars per year, with from four to six per cent being deducted from the wage earner's pay envelope. "The remainder of the cost," he said, "will be paid by you and others like you in general taxation. The actual cost of medical care will be much more than it is at the present time because we will not only have to pay the doctor and hospital, but will also have to pay salaries of a horde of bureaucrats to administer the program."

Continuing, the speaker said: "All of us want to see the time when we will live longer and enjoy our lives in a healthy way. Where in the world has the medical profession done more research than right here in our own country? In the laboratory, in the hospital, in the surgical room, they search for betterment.

"In the last 40 years we have seen the life expectancy of an average American lengthened by 15 years. This far surpasses the gains made in countries that have socialized medicine. Ever onward the scientists work to bring us better health and longer life."

Senator Holt spent a few weeks in England during the fall of 1948. Commenting on medical care in that country, he said, "I found considerable opposition there to the British plan. This opposition was not confined to the medical profession. The record proves that socialized medicine is medicine on the assembly line. Required reading for a doctor is a government book of regulations containing 1281 pages."

As an alternative to socialized medicine, which Senator Holt says is neither cheaper nor better, he advocates the extension of voluntary hospital and medical service plans. "We must realize that there is a general shortage of doctors," he said. "Government taking over medicine will not mean more doctors. It could mean at best that you would be on a medical transmission belt and have a few moments with a government controlled physician."

Concluding, Senator Holt said: "Let us not lose our gain in grabbing at a will-o'-the-wisp proposal which has proven itself a failure. Let us not take this backward step. Let us go forward to improve our already accepted place of having the highest standard of living and of health of any nation on the face of this earth."

Dr. Thomas V. Gocke, president of the Harrison County Medical Society, presided at the dinner, which was arranged by the public relations committee, which is composed of Dr. John F. McCuskey, chairman, and Drs. T. V. Gocke, W. H. Allman, C. O. Post, Ross Allen, J. F. Wilson, Jr., R. T. Humphries, S. S. Hall, C. F. Fisher, and Carl Chandler.

"MOTHER OF THE YEAR"

Mrs. F. H. Brown, of Morgantown, who has been named West Virginia's "Mother of the Year," has four sons who are doctors and three who are dentists. She also has two daughters.

Her selection has been announced by Mrs. Dale Thomas, of Charleston, chairman of the state committee created for the purpose of recognizing some state mother for this honor.

Mrs. Brown is a native of Summersville and the widow of the late Dr. F. H. Brown. She has resided in Morgantown since 1945.

All of her children attended West Virginia University. Four of the sons received B.S. degrees in pre-medical work, and three others the same degree in pre-dental work. Five of the sons graduated from the Medical College of Virginia and the other two completed their education at the University of Maryland.

The four sons who are physicians are as follows: Eugene S. Brown, of Summersville; James D. Brown, of Romney; John M. Brown, of Alderson; and Capt. Robert Brown, of the Army medical corps, now stationed in Alaska. The dentists are F. H. Brown, Jr., of Summersville; Paul H. Brown, of Clay; and William H. Brown, of Sutton. One daughter, Mrs. R. S. Jacobson, lives in Summersville, and the other, Miss Alyce Marie Brown, is a junior in the college of arts and sciences at West Virginia University.

NEW SUPERINTENDENT AT WESTON

Dr. Charles Adam Zeller, medical director of the Governor Bacon health center, at Delaware City, Delaware, has been named by Governor Okey L. Patteson as superintendent of Weston State Hospital, the largest mental institution in the state. He assumed his new duties on May 10.

Doctor Zeller succeeds Dr. Joseph L. Knapp, who resigned to become associated with the Beverly Hills Sanitarium, in Dallas, Texas.

The new superintendent has been active in the field of mental health in Delaware, Pennsylvania, Michigan, and Indiana. A graduate of the University of Buffalo School of Medicine, he served as director of the Indiana Council of Mental Health before accepting the Delaware appointment.

Doctor Zeller is a native of Factoryville, Pennsylvania, and received his academic training at Bucknell University. He also attended West Virginia University School of Medicine. His wife is the former Wanda Broun, of Point Pleasant.

ANNUAL MEETING OF STATE HEALTH CONFERENCE AT CHARLESTON, JUNE 2-3

The 25th Annual State Health Conference, combining sessions of the State Health Officers' Conference and the West Virginia Public Health Association, will be held June 2-3, 1949, at the Daniel Boone Hotel, in Charleston.

A general session will be held Thursday morning, June 2, and section meetings Thursday afternoon. The annual banquet will be held that evening. Section meetings are also scheduled for all day Friday.

The program for the general session on Thursday includes addresses of welcome by Hon. Okey L. Patteson, Governor, and Hon. R. C. Andrews, Mayor of Charleston. The following papers are scheduled for this session:

"Public Health Forecast"—Dr. N. H. Dyer, State Health Commissioner, Charleston.

"Local Health Problems"—Dr. John D. Porterfield, Director of Health, Columbus, Ohio.

"The West Virginia Pediatric Study"—Dr. Russell C. Bond, Chairman, West Virginia Pediatric Committee, Wheeling.

Section meetings in the afternoon will include clerical and vital statistics, industrial hygiene, sanitation, and venereal disease control.

Dr. J. G. Townsend, chief of the Industrial Hygiene Division, USPHS, Bethesda, Maryland, will be the guest speaker at the banquet Thursday evening. He will speak on the subject of "Atmospheric Pollution." Hawthorne D. Battle, president of the Kanawha-Charleston Board of Health, will preside as toastmaster.

Section meetings on Friday morning will be followed by a panel discussion led by Dr. John D. Porterfield, director of Health, Columbus, Ohio. The subject for discussion will be, "Integrating Services to Serve the Public." Business meetings of sections will be held Friday afternoon at 4:30 o'clock.

The annual sanitarian's stag party will be held Friday evening at the Club Charlban at six o'clock, and motion pictures will be shown at the Daniel Boone from seven until nine o'clock.

A special meeting on Friday, at 7:30 o'clock has been arranged by the state department of health and the Kanawha Welfare Council. The guest speaker, Mr. Roy E. Dickerson, executive secretary of the Cincinnati Social Hygiene Society, will discuss "What is Family Life Education."

The meeting will end Friday evening with the annual conference party at the Club Charlban at ten o'clock, and bus transportation has been arranged for all guests attending the conference.

DR. MacGREGOR ON UMW COMMITTEE

Dr. D. A. MacGregor, of Wheeling, has been appointed by Dr. Thomas G. Reed, president of the West Virginia State Medical Association, as a member of the advisory committee to the United Mine Workers Welfare and Retirement Fund. He will represent the northern panhandle. Dr. Ray M. Bobbitt, of Huntington, is chairman of the committee, and the other members are Drs. Fred Richmond, of Beckley, and John P. Helmick, of Fairmont.

PROGRAM COMMITTEE RELEASES NAMES OF SPEAKERS FOR 1949 CONVENTION

The Scientific Work Committee of the West Virginia State Medical Association has released the names of several guest speakers who will appear on the program at the 82nd annual meeting at White Sulphur Springs, August 4-6, 1949.

On Thursday, August 4, speakers will include Doctors L. H. Mousel, of Washington, D. C.; Maxwell Finland, of Boston; and Harry Gold, of New York City.

The Friday program will include addresses by Drs. Irving S. Wright, of New York City; William D. Stroud, of Philadelphia; and Michael E. DeBakey, of Houston, Texas.

The program for Saturday has not been completed, but it is now known that there will be addresses by Drs. Sidney Farber, of Boston; R. M. LeComte, of Washington, D. C.; and Bayard Carter, of Durham, North Carolina.

Night Meetings

The presidential address and an address by the president of the Woman's Auxiliary are scheduled for Thursday evening.

On Friday evening, Dr. Harold C. Leuth, Dean of the University of Nebraska College of Medicine, will be the guest speaker at a meeting arranged for the doctors and their wives.

Will Durant Banquet Speaker

Dr. Will Durant, internationally known author and lecturer, will be the guest speaker at the banquet on Saturday evening, August 6.

Section and Society Meetings

Guest speakers will appear at afternoon meetings which will be arranged for all sections, societies, and associations. Special programs will be presented by the West Virginia Academy of Ophthalmology and Otolaryngology, and the Sections on Industrial Health, Pediatrics, Surgery, and Urology.

There will be a joint afternoon program presented by the Section on Internal Medicine, the West Virginia Heart Association, and the West Virginia Chapter of the American College of Physicians.

Afternoon meetings will also be arranged for the West Virginia Society of Anesthesiologists, the West Virginia Obstetrical and Gynecological Society, and the Association of Pathologists of West Virginia.

The complete program, with the subject of addresses by the guest speakers, will be printed in the July issue of The Journal.

DR. MARQUIS ON WORK-SHOP PANEL

Dr. Henrietta L. Marquis, of Charleston, served as consultant on a panel at a work-shop on the "Care of the Premature Infant," conducted by the Meharry Medical College and Nursing School, in Nashville, Tennessee, May 11-12. Her subject was, "The Medical Aspects in the Care of the Premature Infant."

Doctor Marquis, who is in charge of the state health department's premature demonstration program in Kanawha County, was named as consultant on the panel by the Children's Bureau of the Social Security Administration.

INTERNS AND RESIDENTS TO RECEIVE TEMPORARY LICENSES TO PRACTICE

At a meeting of the public health council held at Charleston, May 12, regulations were promulgated for the temporary licensing of interns and residents for relief work in this state.

The regulations were adopted for the purpose of providing means for the alleviation to some extent of the critical doctor shortage in rural and industrial areas, especially coal mining communities.

Participating interns and residents must be graduates of Class A medical schools and must be serving in hospitals fully accredited by the American Medical Association Council on Medical Education and Hospitals, or the American College of Surgeons.

Applicants must present to the state health commissioner an application on a special form for participation in the program. Information must be furnished concerning year and place of birth, education, and experience, and the application must be accompanied by a statement from an official of the hospital to the effect that it is agreeable with the hospital for the applicant to participate in the relief program.

The applicant will specify location preferred and state time available for relief work. A register for relief doctors will be maintained by the state department of health.

Applicants and sponsors will be given letters of authorization by the secretary of the medical licensing board, and the legal responsibility will be assumed by the sponsor. No fee will be charged for the permit. The sponsor will be required to report to the licensing board and the hospital whether or not the services of the relief physician are satisfactory. The doctor will report to the medical licensing board and hospital concerning his experiences in practice.

The time spent on relief work by a doctor shall not exceed 30 days each twelve months of hospital service, and the sponsor will be required to spend a reasonable length of time with the relief doctor for indoctrination.

The participating physician will take care of all regular reports, filing of birth and death certificates, and communicable disease reports. The relief doctor's signature will be valid on all state documents, insurance papers, and compensation reports during the relief period.

REVOCATION OF LICENSE

The license of each of the following doctors to practice medicine in West Virginia has been revoked: Wilkin Richard Stevens, of Welch, license No. 6473, dated July 10, 1941; and Lawrence T. Browning, license No. 5394, dated December 14, 1927.

The orders entered by the public health council assigned as the reason for the revocation of the license in each of these cases the doctor's conviction of a felony charge.

DR. G. P. MORISON ELECTED PRESIDENT OF STATE ACADEMY OF OPH. AND OTOL.

Dr. Garnett P. Morrison, Charles Town, was elected president of the West Virginia Academy of Ophthalmology and Otolaryngology at the annual spring meeting held at Martinsburg, May 13-14. He succeeds Dr. Sobisca S. Hall, of Clarksburg.

Other officers were named as follows: First vice president, Dr. C. T. St. Clair, Bluefield, and second vice president, Dr. A. C. Chandler, Charleston. Dr. Melvin W. McGehee, of Huntington, and Dr. F. C. Reel, of Charleston, were reelected secretary and treasurer, respectively.

The 1950 spring meeting of the Academy will be held at White Sulphur Springs in May, and members of the Virginia Academy will be invited to meet jointly with the West Virginia group at that time.

Papers were presented at the two-day meeting at Martinsburg by Drs. Glen G. Gibson, of Philadelphia; Walter Klingman, of Charlottesville; James K. Stewart, of Wheeling; G. Slaughter Fitz-Hugh, of Charlottesville; Charles T. St. Clair, of Bluefield; and Ben W. Bird, of Princeton.

Dr. Sobisca S. Hall, of Clarksburg, presented the annual president's address at the banquet at the Shenandoah Hotel, Friday evening, May 13. His subject was, "Secretary Otitis Media."

QUARTERLY STATISTICAL REPORT

The birth rate for the first quarter of 1949 showed a slight increase over the same period in 1948. The rate this year was 23.9 births per 1,000 population as against 22.9 for the first quarter of 1948.

According to Dr. N. H. Dyer, State Health Commissioner, the infant death rate for the first three months of 1949 was also favorable in comparison with the rate for the same period in 1948. The rate this year was 42.6 as compared with 49.8 in 1948.

There were 1,577 deaths reported in West Virginia for the month of March. The death rate for the first quarter was 9.0 as compared with 9.2 for the corresponding period in 1948.

The record lows in tuberculosis mortality for 1948 have been bettered so far this year, the rate being 31.3 for the first quarter, which is ten per cent below the rate of 34.6 for the same period in 1948. So far in 1949, there has been but one death from diphtheria, compared with nine for the same period last year. One death from scarlet fever has been reported, as compared with none for the first three months of 1948.

Actual mortality increases and decreases in 1949 as compared with 1948 are as follows:

Increases: Cancer, 14 per cent; diseases of the heart, 20 per cent; and pneumonia and influenza, 3 per cent.

Decreases: Whooping cough, 74 per cent; measles, 78 per cent; diarrhea and enteritis, 23 per cent; premature birth, 13 per cent; and maternal causes, 35 per cent.

STATE FEDERATION OF WOMEN'S CLUBS OPPOSES SOCIALIZED MEDICINE

The following resolution on socialized medicine was adopted by the West Virginia Federation of Women's Clubs at the annual convention held in Parkersburg, April 7-9:

"WHEREAS, Considerable pressure is being exerted on Congress to pass legislation to place under government control the health and medical care of the people of the United States; and

"WHEREAS, The lessons of history in other lands demonstrate that 'socialized medicine is the keystone of the arch of the socialized state'; and

"WHEREAS, Such action would greatly lower the quality of medical care of our people and impair the relationship between physician and patient; and

"WHEREAS, Progress is being made through voluntary methods to find a solution for the problem of medical care:

"THEREFORE, BE IT RESOLVED, That the West Virginia Federation of Women's Clubs is opposed to the proposed Compulsory Health Insurance Bill or Bills or any form of socialized medicine, but favors the extension of public and private health services, and the preservation of a free medical profession; and

"BE IT FURTHER RESOLVED, That the corresponding secretary be instructed to send a copy of this resolution to the West Virginia State Medical Association and to West Virginia's Senators and Congressmen."

The convention was attended by 585 delegates, representing more than 16,000 members of the two hundred women's clubs in West Virginia.

Mrs. John R. Davis, of Weston, is president of the state organization, and the other officers are: First vice president, Mrs. H. B. Muntzing, Moorefield; second vice president, Mrs. W. W. Brewer, Omar; treasurer, Mrs. Frank Kelly, Greer; recording secretary, Mrs. H. H. Rogers, Glen Ferris; historian, Mrs. J. O. Bell, Bluefield; corresponding secretary, Mrs. Kent Kessler, Weston; and parliamentarian, Mrs. Lawrence J. Miller, Weirton.

PHC LICENSES 21 DOCTORS

At a meeting of the Public Health Council, held April 7-9, in Charleston, twenty-one doctors were licensed to practice medicine in West Virginia. The following is a list of those licensed by direct examination:

Truett Vann Bennett, Gary; Calvin Tolman Johnson, Charleston; Margueritte Johnson Kersey, Bartley; Edward Lewis Kinder, Thorpe; Frank Joseph Leo, Iaeger; and John Wesley Phillips, Kimberly.

The following were licensed by reciprocity:

Paul L. Conrad, Gary; Dwight Phelps Cruikshank, III, Grafton; Harley Glen Feldick, Elkins; Alex Louis Finkle, Beards Fork; Thomas Hancock Garth, Logan; John Jewell Hartford, Charleston; Donald Jay Hunt, Man; Helen Elizabeth Lane, Williamson; John Taylor Morrison, Charleston; Gordon Saver, Laing; Howard Lee Seabright, Wheeling; Henry Thomas Sherman, Williamson; Delbert Cleo Smith, Fairmont; Frank Bradley Snell, Montgomery; and Walter K. Yates, Huntington.

RELOCATIONS

Dr. A. John Oliker, of Elkins, has moved to Auburn, New York, where he will continue the practice of his specialty of urology, with offices in the Auburn Savings Bank building.

* * * *

Dr. William F. Stucky, Jr., who has been in the medical corps of the Army, stationed at Sherman Air Field Base, Fort Leavenworth, Kansas, will be released from military service the first of June and will locate at Winona. He will take over the practice of Dr. Eugene M. Frame, who is leaving to take postgraduate work in the east.

NEW TB AND HEALTH SECRETARY

Thomas A. Deveny, Jr., of Charleston, has accepted appointment as executive secretary of the West Virginia Tuberculosis and Health Association. He succeeds Edwin A. Wells, who tendered his resignation effective January 15, 1949, to accept appointment as executive secretary of the Maine Public Health Association, at Augusta.

Mr. Deveny, who is at present serving as probation officer for the Kanawha County Intermediate Court, will assume his new duties the first of June.

HONORARY MEMBERS ELECTED

Nineteen members of the West Virginia State Medical Association were elected to honorary lifetime membership by the Council at a meeting held in Parkersburg, May 12. This is the largest single group ever to be so honored at any meeting of the Council. The list is as follows:

Joseph L. Miller, Thomas
Lee Otis Hill, Camden-on-Gauley
Herbert B. Wise, Weston
Harington C. Martin, East Rainelle
Charles Francis Mahood, Alderson
Dwight P. Cruikshank, Lumberport
John Patrick McGuire, Clarksburg
Arthur T. Post, Clarksburg
William S. Robertson, Charleston
Wellington Henry Parker, Braeholm
Gustavius A. Grainger, Farmington
Claudius Simel Lawson, Fairmont
Chesney Macauley Ramage, Fairmont
William G. C. Hill, Moundsville
Thomas Judson McBee, Morgantown
Harry Greene Camper, Welch
John Louis McCarty, Berwind
Paul C. Starkey, Ravenswood
John Q. Godbey, Glen Daniel

RENEW NARCOTIC LICENSES

Applications for renewal of narcotic licenses for the year ending June 30, 1950, must be returned to the collector of internal revenue, at Parkersburg, on or before July 1, 1949.

THE WEST VIRGINIA MEDICAL JOURNAL

302 ATLAS BUILDING, CHARLESTON, W. VA.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Editor
WALTER E. VEST, M. D.
955 Fourth Ave.
Huntington, W. Va.

Managing Editor and
Business Manager
MR. CHARLES LIVELY
Box 1031
Charleston 24, W. Va.

Associate Editors:
EDWARD J. VAN LIERE, M. D.
Morgantown, W. Va.
W. M. SHEPPE, M. D.
Wheeling, W. Va.
G. G. IRWIN, M. D.
Charleston, W. Va.
R. H. EDWARDS, M. D.
Welch, W. Va.

JAMES R. BLOSS, M. D., Editor Emeritus, Huntington

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

Vol. XLV JULY, 1949 No. 7

REFRACTION GRIEVANCES*
Their Cause and Cure

By MELVIN W. McGEHEE, M. D.,
Huntington, W. Va.

The purpose of refraction is to correct the optical errors of the eyes so that they can work together with comfort and efficiency in every phase of ocular activity. By employing the science of refraction an attempt is made to put the patient in perfect accord with his environment.

In the process of carrying on an active practice, the busy ophthalmologist is confronted with his largest group of cases in those who come to him to be examined for glasses. The best qualified eye physician occasionally will be confronted with members of this group who will constitute what shall be referred to hereinafter as refraction grievances or "grief cases". It is desirable to look into some of the causes of these difficulties, hold the causes up to the light of experience and ascertain how they may be cured.

The Objectives.—The objectives sought by refraction have been clearly shown by Veasey[1]: (1) improvement of visual acuity—the quantitative element and (2) relief of subjective symptoms (asthenopia)—the qualitative element. It is in the solution of these two objectives that our woes occur. In competent hands routine refractive procedures will end up with what we shall consider a proper prescription. However, the complex psychic factors which often occur will occasionally defeat our efforts. After all, we are dealing with three subjects: the optician, the patient and (the main cog in the machine) the eye physician.

THE OPTICIAN'S RESPONSIBILITY

A good optician is a rare jewel. If he is vitally interested and accomplished in the art of opticianry, the ophthalmologist should recognize these supreme qualifications and lean heavily upon his knowledge and skill. An error in his judgment is interpreted by the patient as the ophthalmologist's error. There is a correlative responsibility in dealing with visual aids and there must be a definite mutual understanding. If the ophthalmologist is convinced that he himself is doing excellent work, he has every right to expect his optician colleague to cooperate in every case with his best quality work and material.

Interpupillary Distances.—In accordance with Krewson[2] the optician expects in the eye physician's prescription not only the correction for distance and near, but it is highly important that interpupillary distances be included. This is doubly important in case the glasses are ordered from a distance by the ophthalmologist and the optician never comes into contact with the patient.

Vertex Distance in High Powers.—In high power spheres the vertex distance must be considered. A lens greater than + or -5 S. may result in 20/30 vision instead of 20/20 vision unless this is considered[3]. All lenses for aphakia are in this group. The lensometer can be used to give the examiner the total vertex power of his combination and the vertex distance may be obtained with a PD rule or preferably a distometer measuring from the anterior surface of

*Presented before the West Virginia Academy of Ophthalmology and Otolaryngology, at White Sulphur Springs, September 21, 1948.

the closed eyelid to the back of the strongest lens.

Angle of Tilt.—If an angle of tilt be desired or is used at the examination, it is sometimes advisable to acquaint the optician with this fact.

Base Curves.—The base curve of previous lenses should be closely adhered to as a change will often produce trouble by image distortion. This is seen occasionally when an optician copies a broken lens for one eye and does not follow the same base curve of the opposite lens. Base curves of bifocals should be close to that of the old single vision lenses when possible. Prism effect, whether horizonal or vertical, is occasionally desirable and, when necessary, should be clearly and specifically stated.

Previous Glasses.—the type of previous bifocals, whether fused or ground in one piece bifocal, should be adhered to in most cases. Obviously, some of our patients will benefit with a change in type of segment and the knowledge of the optician and ophthalmologist will be the deciding factor with prime consideration of the type of patient who is to wear the change. A previously satisfactory bifocal type should obviously be retained except under some circumstances such as a change in vocation or avocation or other reasons whereby a change of type would be preferable.

The Child and Bifocals.—In fitting bifocals for children, the optician must realize that their world is up in the visual field of the adult and the height of their bifocals must be raised accordingly. An ultex A is an excellent lens for them and the segment is placed at the lower edge of the pupil.

Frame and Lens Adjustment.—Poor frame adjustment will lead to discomfort which increases proportionately the greater the spherical or cylindrical power of the lenses. A vertical or horizontal maladjustment when corrected oftentimes solves the patient's entire complaint. Pantoscoping and retroscoping of frames often is necessary for proper adjustment and comfort. This is particularly important in glasses for near use.

Regular shop practice calls for the upper edge of the segment to be fitted on line with the patient's lower lid and the top of the segment 3½ mm. below the geometric center of the lens. It is surprising how often the segments are set too high. The patient's vocation may justify the segment being higher or lower than the standard "3½ mm. below", but this should be ascertained in advance.

The present day optician in order to satisfy the demand for numerous shapes and types of frames, as variable and bizarre at times as milady's hat, must carry a larger stock than ever before of modern and ultra-modern frames. A serious defect in some of these fashionable frames is the facing of the lens planes temporalward, divergently[4]. Many of these frames are excessively broad and unless the lenses are centered with care or prism used to compensate, they may be dispensed with a disadvantageous result.

Tint.—No lens should ever be tinted by the optician without the knowledge and consent of the ophthalmologist. More will be said about this component later.

Commonest Lens Grievance.—The most common cause of grievances in regards to lenses is the poor optical centering. In too many cases the lenses have been ground geometrically without any regard to the visual axes of the patient's eyes. Many times such instances as a frame size of 64 mm. is being worn by a patient with a near PD of 58 mm. Obviously, such an error will produce an imbalance and subsequent asthenopia in these patients. The cure for this lies in proper optical centering both horizontally and vertically. Poor centers occasionally are found in the segments and cylinders absent in the distance portion may be once in a while picked up in the segment.

GRIEVANCES IN GENERAL

A dissatisfied and occasionally belligerent patient does not accomplish anything for the ophthalmologist's practice. In truth they are harmful. It is quite a problem at times in the midst of a busy practice to listen to their complaints in the face of a full reception room, but they nevertheless must be heard. We should, without appearing irritated, elicit and record their difficulties with our product. It is sheer folly to tell a patient to "put the glasses on and wear them and after a while you will have no further trouble". The eye physician who makes such a bold statement without recording his patient's complaints and checking his glasses had better be certain of his ground. From this point on the golden opportunity has been lost and any further dissatisfaction with his lenses will send this patient to another ophthalmologist.

Record and Check.—After listening patiently and recording the patient's complaints, our next procedure is to check the lenses for strength, axes and centering. Not only the refraction sheet

but also the copy of the prescription sent to the optician must be checked for errors. It may be necessary to recheck the original refraction in order to elicit any error in the objective or subjective elements. It is well known that post-mydriatic axes may be different from those found under cycloplegia[1]. Naturally, the greater the cylinder strength, the more blurring or discomfort that will be found.

Clerical Errors.—Clerical erors have occured in the experience of all of us and have proven to be quite an embarrassment[5]. To the patient this is as bad as an error in judgment. The hurried harassed ophthalmologist may put down the wrong sign, axis or lens strength. The cure for this is in being a bit more careful with our records.

The Senile Patient.—Any pathology found in the patients seen for refraction had better be brought to the patient's attention at the completion of the examination rather than later. This is true especially if the condition interferes with vision and particularly if the corrected vision of one eye is better than the other. The examiner may deem it wiser in some cases to inform a close relative of the patient. Nevertheless, someone should be informed as to why glasses will not improve an individual's subnormal vision or relieve his symptoms. A forewarned patient produces a forearmed physician.

The average age of our country's population is becoming older. As a result, the ophthalmologist is seeing more patients exhibiting ocular or other signs of senility. In this regard it is a good idea for the competent ophthalmologist to avoid explaining the ocular infirmities of these senile individuals by a simple cut and dried statement that they are getting older. It is quite true that the major problems of the aged are cataract, chorioretinal degenerations of the macula, and glaucoma, but to use senility as a catch-all to explain the ocular disabilities of these patients is poor policy. It may become a sloppy, wastebasket diagnosis such as has happened in classifying people as psychoneurotic. In other words, the examiner admits he has not come up with the proper diagnosis. Senility is not a disease but any disability as a result of it is. The emphasis should be upon the disability.

The Myope.—There is an unsatisfactory group of patients who often constitute a very difficult group to deal with, namely, the myope upon whom presbyopia is supervening[6]. The "headaches" occur because the myopic presbyope does not at first comprehend the visual problem he is approaching. He often refuses to accept bifocals or at least is not too happy about the prospect. If he wants glasses for near only, he is of course blurred at distance, and conversely if glasses give good distance vision he cannot see clearly at near. He has been living in a near world before the onset of his presbyopia due to the very nature of his refraction and unlike the emmetrope or more especially, the hyperope, has used no accommodative effort at near. Bifocals constitute the best solution for most persons of this group. The solution to the problem lies in the hands of the opthalmologist who first sees the patient. The vocation and avocation may be the deciding factor.

The Presbyope.—The presbyope with no refractive eror for disance confounds the examiner unless the vocation and avocation, i.e., how the glasses are actually to be used, are taken into consideration Even when these patients are shown that the new lenses will blur in the distance, they often at first refuse to accept bifocals much to their own distress as we learn later via phone or when they return stating that the single vision lenses interfere with their work and they now agree that the examiner was correct in suggesting bifocals from the beginning. It is true that they do not need anything but near lenses in many cases. The housewife who wears + 0.75 D. is not using them except for reading, sewing, cards or the piano. She is usually not interested in glasses for constant wear.

Probably the most besetting sin of the ophthalmologist is in prescribing glasses for the presbyope which ultimately prove to be too strong. Even the presbyopic examiner is liable to fall into this pit at times. When a presbyope who is wearing + 100 o.u. for distance and + 1.25 add later accepts + 2.00 o.u. for distance, such an add as + 1.25 may prove to be too close in the final analysis and the final total of + 3.25 becomes too great. The examiner avoids this pitfall by a comparison of the old and the new totals. Too great an increase should certainly be avoided.

Vocation.—The all important factor in regard to lenses at any age is the use to which they are to be put. The avocation and vocation of the patient have been mentioned before, but due regard must be given to this factor from the cradle to the grave. Lack of respect for it constitutes one of the causes for failures in the fitting of patients. The ophthalmologist who remains mentally and sometimes physically fixed upon his refraction stool will meet with returning, unhappy patients. Unless he removes him-

self at times from his ivory tower and sees for himself exactly what his patient does with his eyes to make his living, he is bound to be faced with an occasional failure. One worker does not necessarily become automatically happy with the type of glasses which have pleased other workers of the same occupation. The presbyopic painter, librarian, store clerk or druggist will not necessarily accept the intermediate distance in a segment located in the top of the lenses. It is granted that most of them will, but the patient is still an individual unto himself and must be considered as such. Trifocals are a great boon to many patients enabling them to carry on very happily at their occupations. The experienced ophthalmologist has learned that in some cases the introduction of a third distance, although theoretically and actually perfect, has not proven to be as routinely acceptable as the manufacturers would lead him to feel. Once again, the eye physician must weigh the facts before ordering them for some individuals. It is embarrassing to have to admit failure and remove them. Experience, indeed, teaches a dear school.

High Cylinders.—When a patient receives cylinders above 0.75 D. for the first time there may be difficulty in adjusting to the new correction[5]. The distortion produced by unaccustomed high cylinders is fairly common. Much to the examiner's surprise some patients have fairly good vision in spite of uncorrected high astigmatism. It is a good policy to start low and increase the strength every four to six months after fully explaining the reason and procedure to the patient. In most cases an ultimate adjustment will occur and correction will be entirely satisfactory to the wearer. If encouragement and tincture of time have not resolved the complaints, it is high time the ophthalmologist investigate the cause before some wiser colleague does it for him.

Cataractous and Intumescent Cases.—Incipient cataract cases often prove to have short memories. Veasey[1] explained the problem clearly when he stated that in spite of visual improvement with the new lenses they continue to complain because the ophthalmologist has been unable to restore the vision of their youth. No amount of explanation will satisfy many of this group. One approach toward solution of this problem is to show them the effect of your lenses in comparison to their old ones. They should be permitted to decide for themselves at the time of the refraction whether they desire the change. However, dissatisfactions in spite of such precautions will continue to occur.

Cases of lenticular intumescence fall into the same category. Another factor which occurs is due to the refractive alteration and accommodation loss they read closer than most cases. The ophthalmologist must decenter lenses for 13 inches or even less provided they obtain new lenses for near. The advisability of making a change is often questionable.

The Tired and Neurotic.—The tired all over patient with ocular fatigue and the psychoneurotic patient have been brought to our attention by Maxwell[5]. Obviously, some individuals do have eye fatigue, erroneously called "eye strain", the same as the housewife fatigues at her occupation of housecleaning. The point is that these cases of fatigue and ocular neurosis may require lenses the same as the so-called "normal" individual may need them. Their blurred vision or their asthenopia must not be lost sight of in spite of being beclouded by psychic factors or by generalized fatigue. It is wise to realize that we are dealing with both psyche and soma.

The Cradle and the Grave.—The overanxious parent brings in the child just to see if his eyes are all right. There have neven been any symptoms or signs of eye difficulty but the parent justifiably wants to be sure that there is nothing amiss. The ophthalmologist should be pleased that he has been consulted. He must also be on his guard as some of these youngsters will require mydriasis for ultimate solution of their problem. Naturally, if a careful examination reveals hyperopia commensurate with the child's age, to submit the young patient to lenses would be a crime. Symptoms are often quite recent in these youngsters and occasionally quite vague and hard to elicit. Never should a child with a low error and absence of symptoms by handicapped with a "visual aid".

The aged granny who is brought to the office by younger members of the family does not become a difficulty in spite of often being the toughest group to refract provided the refractionist retains his perspective. Unless these patients can be shown that an improvement is available and desirable, they obviously should never have their lenses changed. Then the opthalmologist must patiently explain why better vision or relief of asthenopia is not available for granny.

Accommodation and Convergence. — First glasses are at times unsatisfactory because the examiner overlooks the importance of the relationship between accommodation and convergence[7]. It is impossible to fit a pair of eyes

properly without knowing the state of the binocular muscle balance. In addition to the phorias and vergences, the amplitude of accommodation should be measured. Often even a low amount of hyperopia associated with esophoria will produce asthenopic symptoms out of all proportion to the refractive error, and such a patient will willingly accept a more or less complete correction. Conversely, a patient with the same type of refractive error associated with exophoria usually will not tolerate plus lenses unless the exophoria is also corrected. Correction of the hyperopia in the presence of esophoria relaxes the excessive effort of the ciliary muscles and simultaneously reduces the extra effort of convergence, all this occurring through the third nerve. If, however, exophoria be present, plus lenses should certainly be centered for reading or further in or possibly prism used. In case of convergence insufficiency, which is the most common defect in the exophorics, it is better policy to center lenses at the reading PD and instruct the patients in regard to convergence exercises rather than prescribe prism base in indiscriminately. Information regarding the status of the extraocular muscles must, of course, be obtained without cycloplegia. Checking the balance with the old correction on as Scobee[8] has suggested will often clarify the cause of the asthenopia.

EXTRAORDINARY PROBLEMS

Monocular Aphakia.—Why we at times permit ourselves to fall for the headaches produced by monocular aphakia, I do not know. In spite of a painstaking preoperative explanation that vision in the better eye is so good that even with a perfect operative result they will not maintain binocular vision, some of these patients cannot understand or refuse to understand why we will not give them glasses for both eyes. When these hard-headed individuals are encountered, it makes one wonder why he ever agreed to produce the aphakia and all this grief.

Anisometropia. — Anisometropia occasionally rears its ugly head in the midst of a calm day's work. For example, in a prescription such as R + 2.00, 20/20, L + 6.50, 20/30, the correction might be tolerated for distance in spite of difference in image size. When the individual looks down to read the eyes drop down 8 mm. and an intolerable hyperphoria is induced. If this patient does not complain with these lenses, he is probably suppressing the left eye. If the centers are ground down at 8 mm. below, the lenses are intolerable for distance. Should the right lens be slabbed-off he complains of the cosmetic appearance being undesirable, or there is a noticeable jump on looking down; 3.6 base up extra prism in the right lens again makes them intolerable for distance. In some cases when the anisometropia is lower in amount than in example, the patient may read with some comfort by either dropping the head or by raising the reading matter so that the optical centers, or an area close to them are utilized. The induced hyperphoria is then much less or absent entirely. Woods[9] has offered what is probably the best suggestion: "adhere to the rule that the spherical difference between the two lenses shall not be over 1.50 D". In this regard it is a good idea for the minus cylinder refractionist to convert his prescription to the signs used in grinding corrective lenses as often no imbalance turns up in the converted prescription, when at first glance it appeared intolerable.

Nonrefractive Asthenopia.—Asthenopia totally unrelated to refraction or extra-ocular muscle disability I believe is on the increase[1]. The stress and strain of modern living and working conditions find the machine improving but human anatomy unable to keep up the pace in many instances. Modern fluorescent lighting comes in for its share as a source of disturbance to some of our patients. Reflections and glare from near working surfaces, contrasting shadows and light produce too great an environmental strain for some of our patients to endure. The ophthalmologist cannot inspect all these cases, but when patients continue to come in from a particular plant or office he should certainly be interested in ascertaining the cause of that situation.

Reflections.—Reflections from lenses are fortunately not too common, but are occasionally encountered. Low minus corections are the commonest ones producing this complaint. I have seen prism base in of ½ D. produce a shadow image which disturbed the wearer. Probably the difference in angulation of the two lens surfaces induced the reflection. In respect to reflection of light, the optician has available coating surfaces which reduce it in amount from around 4 per cent to 2 per cent.

Tinted Lenses.—Tinted lenses should not be worn indoors under properly placed artificial light unless the eyes are diseased or are especially sensitive, and never out of doors at night. To attempt a compromise between natural sunlight and indoor artificial lighting is a practical impossibility. Many times lenses with a low degree of tint are given in the hope that the two conditions might be met half way. With such a low degree of tint that is exactly what happens. It is indeed a poor compromise. It is better for the light sensitive patient to have

outdoor glasses with an absorption factor of 60 to 75 per cent of the light to protect him against unusually brilliant sunlight and its reflections[10]. This means two pairs of glasses, each for a different purpose, and is applicable in many cases.

THE OPHTHALMOLOGIST'S RESPONSIBILITY

In the final analysis the result which the patient obtains depends upon this member of the trio. Responsibility for any error which may have occurred falls upon his shoulders, and these people are often slow to praise but quick to damn.

A lensometer or vertometer is an indispensable part of the modern refraction equipment. Some of these instruments possess no spotter and in this regard there is missing a very important part of the instrument. The optical centers of the lenses are just as important as the strength and axes of the cylinders. It is good policy not to record the strength of the old lenses until the examiner has completed and recorded his own results. This keeps him on his mettle, relieves him of possible bias, and permits of a final comparison of the lenses producing the trouble with what he believes will relieve it. He may wish to return to his own lenses to compare the effect of new axes and lenses while his mind is in the midst of the battle.

The physician should take his own Pds. on every paitient. It is impossible to center properly the phoroptor or the trial frame or to take correct vergences and accommodation measurements without having the lenses properly centered for distance and near as the case may be. It is a vital part of the prescription.

The possession of an extra trial frame often proves a boon to refraction. These questionable cases in which there is a suspicion that a change in lenses will not prove to be beneficial often can be decided by allowing the patient to read for some time in the reception or mydriatic room.

The eye physician should know a good deal about the fitting of glasses and their final adjustment, both mechanical and optical. He may be an excellent surgeon and a good diagnostician, missing few pathologic states, but he is not approaching the finished clinician until he knows also the mechanics of the visual aids he is prescribing daily. The adjustment of lenses with proper alignment of optical centers cannot be overstressed. Lack of knowledge can interfere with good work. Whether the ophthalmologist fits his own glasses or not, ignorance in this field is no excuse. It is, of course, impossible always to do so but every pair of glasses made from his prescription should be checked whether satisfactory or not.

After having concluded that he has the proper prescription for his patient, the eye physician should deliver it to him along with any remarks applicable to the wearing of the new lenses. The opportune moment has slipped by if the patient must return in an unhappy state of mind to receive a belated explanation of a pathologic condition, convergence insufficiency or anything else he should have been told before. However, it he returns in spite of efforts at foreseeing grief, listen with courtesy and hope that the fault may be found and that he may be finally restored to happiness.

The zealous ophthalmologist has his patient's interests at heart and fulfills his own destiny by honest self-appraisal and self-criticism of his own work. The pleasure and income from his practice are both increased. Never does he point in scorn at the product of a colleague, because he is aware that he simultaneously points three fingers at himself!

SUMMARY

It is merely to avoid the sin of omission that aniseikonia and cyclophoria are herewith recorded. I am unable to diagnose the former. The latter may be suspected when cylinders are inaccurately placed.

The objectives sought by means of refraction is a satisfied patient, whether he obtains new lenses or is advised that no glasses are necessary.

The optician has a heavy responsibility in producing a satisfied patient. Obviously, the clinician's surveillance is necessary.

CONCLUSIONS

1. Every grievance must be heard, recorded and checked. They deserve an attentive ear.

2. There is no assembly line as far as refractions are concerned. A rushed examination often is worse than none at all. Muddling through has no place in the refraction room.

3. By intelligent employment of his experience, knowledge and common sense, the ophthalmologist attempts to foresee his difficulties with each individual, and avoids later grievances by patient explanation. His reward is fewer grievances and more satisfied patients whose eyes are employed with comfort and efficiency.

REFERENCES

1. Veasey, C. A., Jr.; The Dissatisfied Refraction patient, Am. J. Ophth. 30:1286-1293 (Oct.) 1947.
2. Krewson, W. E.: What the Optician Expects in the Eye Physician's Prescription, Guildcraft, 21, No. 3:39-45 (Oct.-Nov.) 1947.

3. Mangold, A. E.: The Optician's Part in the Fitting of Glasses, Amer. Acad. Oph. & Otol., Graduate Lecture Course No. 165, Chicago, 1947.
4. Olsho, S. L.: Pitfalls in Refraction, E. E. N. T. Monthly 24:517-522. (Nov.) 1945.
5. Maxwell, J. T.: Editorial: You Lose Refraction Patients, Digest Ophth. & Otol. 10:238-249 (Feb.) 1948.
6. Neblett, H. C.: The Myope at the Beginning of Presbyopia, So. Med. & Surgery pp. 174-175 (May) 1944.
7. Green, A. S.: Why First Glasses are often Unsatisfactory, Bull. Practical Ophth. 10, No. 2:27-29 (April) 1940.
8. Scobee, R. G.: The Oculorotary Muscles, ed. 1, St. Louis, The C. V. Mosby Company, p. 113.
9. Woods, R. H.: Some Reasons for Ocular Discomfort, E. E. N. T. Monthly 25:503-507 (Oct.) 1946.
10. Cowan, Alfred: Tinted Lenses, J. A. M. A. 136, No. 17:1098-1099 (April 24) 1948.

MODERN ANESTHESIA

Anesthesia has developed in only a few more than a hundred years from a procedure whereby surgery was performed with the assistance of a quart of whiskey and four strong men to hold the patient, to the art and science of anesthesiology as it exists today.

No longer is the administration of the anesthetic by the trained anesthesiologist limited to ether or chloroform. Today he has at his disposal a number of agents and technics from which he may choose. He may accomplish anesthesia or analgesia by inhalation, intravenous injection, spinal injection, intramuscular injection, rectal administration, refrigeration, or a combination of two or more of these. Each agent and technic has its advantages under certain circumstances and for certain purposes. By combining agents and technics the anesthesiologist is often able to secure the advantage of each.

Today's anesthesiologist, a doctor of medicine who has specialized in the physiology of the respiratory, circulatory, and nervous systems of the body and the pharmacology of anesthetic drugs, is concerned with three factors, i. e., the safety of the patient, the success of the surgery, and the comfort of the patient—in that order.—J. Med. Assn. Georgia.

CANCER A FIFTH COLUMN

Degenerative diseases of the heart are accepted almost as a badge of merit. They are considered to be the penalty of industrious application to one's duty and the discharging of a personal debt to society, with interest. Like ulcer, they repersent a wound stripe of modern civilization. Cancer, ominous and mysterious, inspires a terror that the conception of heart disease seems to lack. It still implies a portentous degree of finality, as if the knell were already struck, the tolling of the bell begun.

The reasons for these differences in viewpoint are obvious. Heart disease warns of its encroachment on the patient's health, and good behavior may postpone indefinitely the final accounting. The idea of a fighting chance for the prolongation of life, with reasonable activity and comfort, is almost always present. Cancer, on the other hand, is a fifth column that may have infiltrated beyond hope of eradication before it is discovered.—New England J. Med.

THE TREATMENT OF STRABISMUS*

By OSCAR B. NUGENT, M. D., F. A. C. S., F. I. C. S.**
Chicago, Illinois

In the treatment of strabismus the ophthalmologist is confronted with many perplexing problems and situations directly concerning the ocular deviations, likewise with problems that are only incidental to strabismus but are just as important in their consideration.

THE PROBLEMS CONCERNING STRABISMUS

Etiology.—The cause of strabismus in children is not always the same as that in adults. However, many adults have strabismus which they have had since childhood, the cause in such cases being the same as that of childhood. According to Guibor[1], strabismus in adults usually is a result of trauma, syphilis or vascular accident, while in children congenital deficiencies, refractive erors, mechanical distortions of the orbit, childhood infections (especially pertussis), encephalitis, anoxemia and trauma occurring during birth, or fusion disturbances may be responsible.

Since obviously it is impossible to include all known facts about so vast a subject in a single paper, such points as normal, abnormal or anomalous correspondence, the relation of squint to its causal factor, so well described by Alder and Jackson[2], retinal correspondence[3] and visual training[4] in ambloyopia will be omitted or only lightly considered. Much can be gained by reading Burian's work[5].

Fear and misapprehension on the part of uninformed parents often are drawbacks in the planned management of strabismus. On the other hand, well informed and cooperative parents are a great help. In most cases, it is necessary for the parents, especially the mother, to make a great sacrifice in time and energy in order to assist the ophthalmologist properly.

The physicial and mental makeup of the patient, the age, parental training and control, and the ability of the ophthalmologist to gain the patient's confidence and cooperation all play their part in the success or failure of the treatment.

Diagnosis.—The first step in the management of strabismus is, of course, proper diagnosis. This is not always easy. The degree of deviation, the type of deviation, the error of refraction, visual acuity, innervation and motor reaction,

*Presented before the annual meeting of the West Virginia Academy of Ophthalmology and Otolaryngology, at White Sulphur Springs, September 20, 1948.

**From the Ophthalmic Department of the Chicago Eye, Ear, Nose and Throat Hospital, Chicago, Ill.

COLLEGE OF PHYSICIANS OF PHILADELPHIA

all are to be considered along with other information in arriving at a correct diagnosis.

A point to be remembered, and one which will be a good guide in making a diagnosis, is the fact that patients with a relatively low degree of strabismus have, in a majority of cases, normal retinal correspondence and usually are of the accommodative type, the low degree of strabismus being caused by excessive convergence innervation. Those with a high degree of convergence usually have anomalous correspondence, and the etiology is quite doubtful or unknown. This, however, is not true in all cases of strabismus, as there can be found many cases of high degrees of convergence which is of the accommodative type and which have normal retinal correspondence.

Treatment.—It is expedient to inform the parents concerning their part in the treatment as well as the probable period of time the entire treatment may consume, the future possibility of surgery if the nonsurgical treatment should fail, and the necessity for their continued cooperation.

The error of refraction should be ascertained by retinoscopy under atropine cycloplegic and full correcting lenses prescribed as soon after the deviation has been discovered as is possible. In some cases, this can be accomplished as early as the eighth or tenth month. This procedure alone will correct about 30 per cent of cases[6]. In cases which are not corrected by lenses, the fixing eye should be occluded or atropinized in order to build up the visual function of the deviating eye. I use both methods but prefer the method of occluding the fixing eye for two or three hours daily. However, the use of atropine is much more convenient for the mother or nurse as it is installed only once a day or once every two days.

I do not believe that the continual use of the occluder over several weeks or months is good practice but feel that the fixing eye should be allowed to function a few hours daily in order to avoid any possible deterioration of vision. Swan[7] reports a case in which esotropia was produced in an eight year old boy by the constant use of an occluder over a period of six weeks for the purpose of increasing the visual function of the amblyopic eye. Daily occlusion of the fixing eye until the visual acuity of the deviating eye is normal or greatly improved added to the wearing of properly fitted lenses often will produce the desired results but if it does not, the occlusion should be continued until the child is old enough to start orthoptic training. Few children will cooperate well with the orthoptic technician before the ages of five or six years.

If the child is seen early, it may mean that four or five years will elapse before orthoptic training can be started, and during this time the patient should be kept in good physical condition. The eyes should be refracted often under cycloplegic and the lenses changed as often as is found necessary.

It is my opinion[8] that surgery should not be attempted until the patient has had an ample amount of orthoptic training[1] except in a small percentage of cases in which there is a high degree of deviation and/or in cases in which the patient or the parents are indifferent and do not cooperate with the ophthalmologist.

Orthoptic training should be performed by one who understands well the principles of othoptics and their application to the patient's individual needs. If the patient has had properly fitted lenses and occlusion or atropinization of the fixing eye from the inception of the strabismus, he will be much better prepared for orthoptic training than the patient who has not had such treatment, and the final results will be far more satisfactory. But whether the patient has or has not received proper care orthoptic training[9] should be given even in older children as much can be accomplished by its use.

The number of orthoptic treatments a patient will require will, of course, depend upon the patient's condition. Some have been brought to a satisfactory termination in as little as ten training periods while others have required months and even years to attain good results. To illustrate what can be accomplished by months or years of persistent training, a case report follows.

CASE REPORT

R. Y., age 7, was a healthy, robust, well nourished child. The mother noticed the left eye crossed at about 5 years of age. The patient had worn glasses for two years and had been treated with atropine and occlusion of the fixing eye. Examination: Left eye convergent about twenty degrees with or without correcting lenses (right eye: + 1.75 sphere = 20/40; left eye: + 1.75 sphere = 20/50) which he had worn for one year. There was some overaction of convergence, an apparent paresis of the left externus and two degrees of left hypertropia.

The patient was re-examined under atropine cycloplegic and a slight increase in the sphere with a cylinder in each eye was prescribed which brought his vision to: right eye 20/25,

left eye 20/50. He was given daily occlusion of the fixing eye resulting in second grade fusion with amplitude and normal retinal correspondence, 12 degrees of left convergence with correction and 14 degrees without correction. After twenty months of orthoptics and two changes of lenses with prisms, the patient still had ten degrees of convergence with a slightly greater amplitude. In one year, diplopia developed and surgery was suggested. The mother refused surgery and orthoptic training was continued. At the end of two years, there were five degrees of convergence with correction. Vision in the crossed eye had gone from 20/50 to 20/30. After five years of almost continuous orthoptic training and three refusals of surgical intervention by the mother, the patient had binocular single vision with eleven prism diopters of esophoria for both distance and near; after six years of almost continual orthoptic training, the hypermetropic disappeared and the patient had two prism diopters of esophoria. Vision: right eye 20/13, left eye 20/13; the wearing of lenses was discontinued.

The foregoing case report illustrates what might have been accomplished in many of the cases which the author has treated by surgical means and also serves as a reminder of the value of continued orthoptic training.

Resume of 106 cases of strabismus treated by nonsurgical methods as previously described.

Females—61 or 57%
Males—54 or 43%
Age at onset—birth to 5 years.
Average age at onset—2½ years.
Age treatment was begun—9 months to 30 years.
Average age at beginning of training—8 years.
Length of time of orthoptic training—5 weeks to 6 years.
Average number of treatments per patient —39.
Number of successes—100, or 94.3%.
Not satisfactorily completed—6, or 5.7%.
Refused surgery—4, or 3.7%.
Orthoptics not available—1, or .9%.
Intermittent convergence—1, or .9%.
Defective vision in one eye—33%.
Defective vision in both eyes—11%.

CASE REPORT

(This is one of the cases in which surgery was refused). W. C., male, age 11. Diagnosis: Right convergent concomitant strabismus of 20 degrees; patient had wide amplitude of fusion and could maintain binocular single vision with 10 prism diopters base out and two prism diopters base down over right eye and two prism diopters base up over left eye.

CASE REPORT

I. M., male, age 30. Good physical condition. Complained that his right eye had turned out for about a year. Examination: small astigmatic error in each eye. With correction, vision: right eye 20/20, left eye 20/20. Motility: paresis of right internal rectus, weakness of right superior rectus and overaction of left superior oblique. Binocular single vision at times; has good fusion.

Treatment: Orthoptic training over a period of two months resulting in well balanced lateral muscles and a small degree of vertical phoria requiring a two vertical prism for comfort.

In cases in which the wearing of lenses prescribed under atropine or the use of the occluder or atropine in the fixing eye and a long period of orthoptic training does not produce the desired results, an attempt to straighten the eye by some type of surgical procedure should be made.

The operative procedure should produce the least amount of damage to the structures involved. The author's choice is a recession operation[10] with control suture[11, 12] accompanied by an advancement or resection operation of the opposing muscles if necessary.

As a general rule, a recession operation alone will suffice if the deviation is 20 degrees or less but this is not always true; cases have been encountered with only 10 degrees of deviation which required an advancement operation on the opposing muscle as well.

The muscle, muscle tendon and the ramifications of the capsule of Tenon around the muscle sheath vary in different individuals to such an extent that it affects the results of an operation on the muscle in different ways, i.e., the same operative technic performed on two patients with the exact degree and type of deviation often will produce different results.

It is therefore necessary, in performing a recession operation, to free the capsule of Tenon both above and below the muscle attachment so that the retraction of the muscle will not be inhibited and its recession will be in accordance with its muscle tone. A strong, well developed muscle will recess to a greater degree than a weak, underdeveloped one. The future position and motility of the eye following surgery will depend upon the free action of the extrinsic muscles; therefore, if the muscles are inhibited in their movements by fibrous attachments of the capsule, the eye's free action cannot take place.

Vertical deviations can be corrected in many cases by a recession of the inferior oblique and or the superior[13] or inferior rectus as the case may require.

Resume of 166 cases treated by surgery and orthoptics.

Females—107 or 63%.
Males—59 or 37%.
Average age at onset—3 years.
Number of successes—160, or 96.5%.
Not satisfactory—6, or 3%.

Of these six unsatisfactory cases, four were overcorrected and two were undercorrected. Five of these were reoperated upon; one refused surgery.

Defective vision in one eye—33%.
Defective vision in both eyes—12%.

All cases operated upon having five degrees or less of deviation following surgery were considered successful. Of all cases fifteen years or under, about 67 per cent were successfully treated by nonsurgical methods, and over fifteen years of age only about 33 per cent were successful with nonsurgical methods.

CONCLUSIONS

1. The parents as well as the patient must be cooperative if the best possible results are to be obtained.

2. Early training brings best results.

3. Temporary suspension of function of the fixing eye either by atropine or daily occlusion is a very important part of the treatment. The author prefers daily occlusions in most cases.

4. Frequent estimation of the refractive error under cycloplegic is recommended.

5. Early surgery is not recommended. If time and patience are given to the nonsurgical treatment, much surgery can be avoided.

6. The reccession operation with control suture in all cases, with some form of advancement of the opposing muscle where necessary, is the method preferred.

BIBLIOGRAPHY

1. Guibor, G .P.: Practical Points in the Diagnosis and Treatment of Squint in Children, Kentucky M. J. (Aug.) 1946.
2. Alder, F. H. & Jackson, F. E.: Correlations between Sensory and Motor Disturbances in Convergent Squint, Arch. Ophth. 38:289 (Sept.) 1947.
3. Krimsky, E.: Corneal Light Reflex in Diagnosis of Retinal Correspondence, Arch. Ophth. 38:468 (Oct.) 1947.
4. Feldman, J. B.: Use of the Telescopic Amblyoscope in Visual Training for Defective Vision, Arch. Ophth. 38:494 (Oct.) 1947.
5. Bruian, H. M.: Sensorial Retinal Relationship in concomitant Strabismus, Arch. Ophth. 37:336 (March) 1947; ibid. 37:504 (April) 1947; ibid. 37:618 (May) 1947.
6. Guibor, G. P.: Early Diagnosis and Nonsurgical Treatment of Strabismus, Am. J. Ophth. 52:907 (Oct.) 1936.
7. Swan, K. C.: Esotropia following Occlusion, Arch. Ophth. 37:445 (April) 1947.
8. Nugent, O. B: Functional Training: An Aid in the Surgical Correction of Strabismus, Am. J. Ophth., vol. 23, no. 1 (Jan.) 1940.
9. Nugent, O. B.: & Ilg, V.: Newer Developments in Orthoptics with Reference to Reading Problems, Arch. Phys. Therap. 22:225 (April) 1941.
10. Nugent, O. B.: Recession Operation with Control Suture, Am. J. Ophth., vol. 18, no. 8 (Aug.) 1935.
11. Nugent, O. B.: The Management of Strabismus, J. Iowa State Med. Soc. (Dec.) 1942.
12. Nugent, O. B.: Strabismus and Its Correction, E. E. N. T. Monthly 23:139 (April) 1944.
13. Lavery, F. S.: Three Casese of Vertical Strabismus Cured by Operations, Tr. Ophth. Soc. U. King. 59:835, 1939.

THERAPEUTIC RELATIONSHIP

We are often too busy to remember that every contact of every doctor with every patient constitutes a therapeutic relationship, not confined to the cut finger or the sore throat: a relationship which leaves the patient at ease, easier than when he came in, vaguely unsatisfied and uneasy, or more apprehensive, dissatisfied, disappointed, and possibly hostile.

Actually as we gain more experience in the treatment of functional illnesses, we come to the realization that what we say and what we do is not nearly so important as giving the patient ample oportunity not only to air his problems, but to vent in a safe place—the physician's office—a good many of his feelings; to say things, to express dissatisfactions, resentments, and other emotions that he does not feel safe in expressing anywhere else in the world for fear of what the world may do to him in revenge.—H. H. Murdock, M. D., in Wisconsin Med. J.

RESPONSIBILITY IN CEREBRAL PALSY

In speaking of the responsibilities of the physician in the care of cerebral palsy, one thinks first of methods of prevention. Still nothing con be offered save the time-honored precepts of good prenatal care, safe, conservative delivery and wise pediatric management.

The greatest responsibility falls upon you who, in your general practice, see these children close to their home environment, examine them at frequent intervals and watch their growth and devlopment. Only by making an accurate diagnosis, observing response to therapy and correlating the clinical picture with pathological findings, will we understand the complicated problems of the cerebral palsied.

When the general practitioner accepts and understands the child with brain abnormality, as he does one with heart or kidney involvement, an important milestone in prevention will have been reached.—Harriet E. Gillette, M. D., in Southern Medical Journal.

STREPTOMYCIN IN TB

Most of the clinical experience with the streptomycin treatment of pulmonary tuberculosis has indicated that this antibiotic is effective against the acute exudative lesions and that little or no benefit may be expected in the chronic fibroid or fibrocaseous types of pulmonary lesions, in which the antibiotic may not have adequate access to the organism.—New England J. Med.

RECENT ADVANCES IN THE SURGICAL TREATMENT OF COLON AND RECTAL DISEASE*

By GARNET W. AULT, M. D.**
Washington, D. C.

This subject is too large to be completely and satisfactorily covered in a short period of time. However, I would like to discuss some of the problems encountered in every physician's practice. The suggestions made regarding diagnosis and treatment are largely based upon our experience in this field. However these suggestions are also influenced by some of the current trends in surgical practice. An effort will be made to distingush between progress and passing enthusiasm.

PROBLEMS OF INFANCY AND CHILDHOOD

I would like to respectfully suggest that a digital anorectal examination be performed by the attending physician on every newborn infant before the child is pronounced well and healthy. Anorectal malformations can and should be recognized promptly. A physician's prestige is subject to unfavorable comment in any community when these malformations are reported at a late hour by the parent or nurse.

Complete membranous occlusion of the anorectal canal may be diagnosed if a dark green bulging membrane is identified within its confines. The bulging tension increases after birth and is relieved by spontaneous rupture, digital rupture or surgical incision.

Partial membranous occlusion is ordinarily not recognized until a later date. In many instances, the parents or nurse will report that the infant strains, cries and seems to be having a great deal of colic associated with bowel movements. The difficult passage of a thin toothpaste type of stool will be noted. This type of defect often may be located and corrected by simple digital examination. Repeated dilation may be necessary. Early recognition and treatment of this condition may relieve many infants of colic during their first few weeks of life.

Incomplete descent of the rectal pouch and congenital absence of the rectum are rare. The diagnosis is facilitated by waiting eighteen to twenty hours after birth before taking roentgen films of the abdomen. The infant is held in an inverted position and the lower abdomen is massaged in an effort to make a gas bubble move to the most caudal end of the rectal pouch or colon. A thermometer is placed in or on the anus. If a gas bubble can be visualized close to the anus, incomplete descent of the rectal pouch is the correct diagnosis. One may anticipate locating the rectal pouch by a perineal approach and a satisfactory surgical result is thus assured. However, if the gas bubble is closer to the sacral promontory, or above it, a diagnosis of congenital absence of the rectum is probably correct. A perineal operation is not indicated. A colostomy, located in the right transverse colon, is recommended. Anorectal surgery performed during the second or third year may then be more successful.

In conclusion, I would like to suggest that less "emergency" surgical treatment of the more serious or complicated rectal malformations be performed. Frequent attempts should be made to locate the caudal end of the bowel before deciding between a perineal or an abdominal operation.

Megacolon or Hirschsprung's disease is encountered often enough in childhood to warrant a brief discussion. At this time, no individual or group has had enough experience with this condition to be dogmatic regarding treatment. The results of management with sympathetic or parasympathetic drugs are satisfactory in many instances. The value of sympathectomy remains questionable. Sterility in the male may be an unpleasant complication of sympathectomy. Sufficient evidence that this does not occur has not been presented to date. When hypertrophic structural changes develop in the colon, there is an increasing tendency to perform desections of the involved bowel. Segmental resections or total colectomy will effectively solve this problem when proper selection of patients is practiced. I would strongly urge that this form of treatment be given greater consideration in the future.

Prolapse of the rectum in infants and children has, in our experience, involved all the layers of the bowel. A prolapse of two or three inches of bowel is not rare and incontinence is found associated with this condition in many instances. Simple linear cauterization will effectively solve this problem in a high percentage of cases. The injection of sclerosing solutions is not recommended, as such treatment is too frequently attended by complications.

In closing this incomplete discussion of pediatric proctology, I would like to point out that fissure is the most common cause of bleeding in infants and children. It responds to palliative treatment in most instances and operation is

*Presented before the Acodemy of Medicine of Parkersburg, February 3, 1949.

**From the Deportment of Surgery (Proctology), Georgetown University School of Medicine, Washington, D. C.

rarely necessary. Hemorrhoids are very rare in children; pinworm pruritus is very common; polyps are not unusual and their presence is regularly confirmed by proctoscopic and roentgen studies.

CONSTIPATION

In everyday practice, I am reasonably certain that obstruction at the anal outlet is an important condition responsible for constipation in both sexes. In many instances, a deformity of the lower rectum in the female, namely rectocele, is a great factor causing incomplete emptying of the rectum.

Constipation due to obstruction at the anal outlet often may be indicated from the history. I would, therefore, urge you to obtain a careful history from these patients. In both sexes, the history will indicate that the anal opening is too small, too sore, too crowded with hemorrhoidal tissue, too irritable from pruritus or too tense for some unknown reason. Many patients relate their difficulties to enemas and rectal tubes used during a previous hospitalization. Soreness, pain and spasm from a chronic or recurrent fissure is a common cause of constipation. With recurrence of chronicity, the anus is prone to become spastic and tight which in turn results in fibrosis, stenosis and multiple fissuring. Relief of this vicious cycle is sought by dieting, the prolonged use of mineral oil, cathartics and saline laxatives. This sequence of events is aided and abetted indefinitely by the laxative program. The saline laxatives are poorly tolerated by such a diseased anal outlet. The patient will now relate that he or she has not had a normal caliber stool for months or years.

The diagnosis and treatment of pathologic anal obstruction should not be difficult. I urge you to exclude rectal and sigmoid malignancy before proceeding with surgical treatment. The surgical correction of the local pathologic condition should be aided during the immediate postoperative phase by attempting to form a habit time of bowel movement. The use of the mild bulk producing lubricants should be started very promptly and continued on a decreasing scale for some time. Many individuals whose constipation is of anal origin will be materially improved and in many instances the correction of bowel habit will be permanent.

Constipation of rectal origin, associated with rectocele and relaxed perineum, is very common in both the nulliparous and multiparous females. I am constantly seeing patients who complain of stool packing in their rectum. The formed stool bulges forwards towards the vagina. Pressure in the perineum instead of the anus is noted. These patients state that they cannot expel a formed stool without pressing the perineum upward and backwards towards the coccyx. The stool must be passed in a liquid or unformed condition by the use of laxatives or enemas.

The diagnosis and treatment of a rectocele in this instance are not always easy, for the degree of anatomical deformity may be great or small. It is sometimes difficult for gynecologists to agree with our recommendations when a perineal operation is advised. However, it is my considered opinion that repair of the rectocele is indicated. When a normal angle is attained between the lower anterior rectal wall and the anal canal, the stool will no longer pack in this area. In women of childbearing age, the decision may be difficult and each case must be decided upon its own merits. When rectocele and anal pathology are present in the same patient, I would respectfully suggest that the patient's anal pathology be corrected first. When a normal anal canal is attained, the success of the perineal reconstruction is more certainly assured.

CARCINOMA OF THE RECTUM

There is evidence in our office records that the national campaign of cancer education is resulting in our seeing patients with polyps and rectal malignancy earlier than heretofore. As a result of this campaign, patients are demanding rectal and pelvic examinations as a part of a general physical examination. I cannot urge you too strongly to participate. Patients are asking, with increasing concern, why rectal and pelvic examinations are omitted from a general physical examination. There is nothing new with respect to the diagnosis of rectal carcinoma that overshadows a simple digital examination. A proctoscopic examination and biopsy will confirm the diagnosis if there is any doubt as to the nature of the lesion.

At the present time, there is considerable controversy in this country and abroad regarding the surgical treatment of carcinoma of the rectum. The classical Miles abdominoperineal resection is, without question, the most radical method of surgical treatment as it removes the superior, lateral and inferior zones of lymphatic metastasis. If this is an acceptable view, then it becomes a matter of experience and judgment as to when this procedure may be modified.

Those who advocate anterior resection for carcinoma of the rectosigmoid and upper third of the rectum are on safe ground if their dissection carries them well towards the origin of the

inferior mesenteric artery. The tissues enclosing the middle hemorrhoidal vessels should be left on the specimen. The bowel should be divided one inch or more below the lower edge of the lesion if there is no demonstrable metastasis in the posterior rectal tissues. If, at the conclusion of this much dissection, one can effect a low end to end anastomosis between the proximal bowel and rectal stump, the operation has not been compromised. The avoidance of a colostomy is justified, and one can anticipate a five year cure rate comparable to the classical Miles procedure.

Some lesions whose lower edge is felt approximately three inches from the external margin of the anus occupy the middle third of the rectum. Thus located, they are just above the fascial and lymphatic drainage plane of the levators. There is an increasing tendency to advocate sphincter-saving operations for malignancy in this location. In general, I do not approve of a variety of these operations. However, I would urge you to keep an open mind in this respect. With the advent of chemotherapy and antibiotics, there is a tendency to revive the combined abdominosacral type of anastomosis. It is my considered opinion that this procedure will supplant the Babcock operation. It is as radical as the Miles operation during the abdominal phase and by leaving the sphincters and levators intact, complete continence can be anticipated. It is not an acceptable procedure for malignancy of the lower third of the rectum.

Malignancy of the lower third of the rectum is best treated by a Miles abdominoperineal resection except in poor risk cases when one may perform a colostomy and perineal resection as outlined by Lockhart-Mummery. Sphincter-saving operations have no place in the surgical treatment of lesions in this location. Wide removal of the levators and perineal tissues is essential if one wishes to increase the five year cure rate.

CARCINOMA OF THE COLON

Many noteworthy factors have been responsible for the recent progress made in treating cancer of the colon. Resection and anastomosis in one stage for nonobstructing lesions is being done with increasing frequency. I should like to discuss briefly some of these factors in the order of their importance.

It is safe to state that approximately 90 per cent or more of the intestinal surgery performed in this country today is being favorably influenced by the use of chemotherapy and antibiotics. Multiple stage operations and exteriorization procedures are being done less frequently and the various devices and clamps advocated for closed anastomosis are being slowly discarded. To be more specific, it has been our practice to give all patients scheduled for elective colon surgery either sulfathalidine or sulfasuxidine for five or six days before operation. Sulfathalidine is given in divided doses for a total of 6 Gm. per twenty-four hours. Sulfasuxidine is given in divided doses for a total of 12 Gm. per twenty-four hours. Dihydrostreptomycin is started thirty-six hours before operation in doses of ½ Gm. every three hours so that a total of 4 Gm. daily is administered. Immediately following operation, we have been giving some of the new types of penicillin hypodermically for a period of five to seven days. Doses of 300,000 units every eight hours are standard, but this is varied according to the apparent need. Dihydrostreptomycin is continued on the same dose schedule after operation until a total of 16 to 18 Gm. have been given. This intensive therapy is utilized for we wish to give our patients as complete protection from infection as possible. You may agree that this is desirable, or you may feel that it is unnecessary. In either event, it has given us the feeling that we are protecting our patients to the utmost. As a result, the frequency of peritonitis and wound infection has materially decreased. Morbidity has declined, and we are reasonably certain that our results, to be compiled a few years hence, will demonstrate all of this in a favorable manner.

Intestinal intubation continues to be an important factor during the immediate preoperative and postoperative phases of intestinal surgery. Complete emptying of the stomach by limiting oral intake or by gastric suction is initiated twenty-four hours before operation. The balloon is filled with 5 cc. of mercury to facilitate intubation of the jejunum or ileum. The location of the tip of the tube in the small bowel is recorded in the operative dictation. Small bowel intubation accompanied by either continuous or intermittent suction is maintained for a period of four or five days following operation. This is an effective internal enterostomy proximal to our line of anastomosis. As a result, post no-operative ileus and distention are minimized and the patient's postoperative status is favorably influenced. Gastric retention and dilation can and does occur when the tube functions in maintaining jejunal or ileal decompression. The alert physician will recognize this and will move the suction tip back into the stomach or provide other means of relief.

Those of us who have attempted to perform some of the more difficult types of colon resections in the past under unfavorable anesthetic conditions, can eloquently testify that better anesthesia has materially aided the progress recorded in this type of surgery. A well trained versatile anesthesiologist makes it possible to extend the resectability rate. As a result, we are resecting patients heretofore considered poor risks. Atelectasis, pneumonia or cardiovascular collapse does not develop in these patients. The extent of various operations is being increased and an increase in five year cure rates can be anticipated. We are indeed grateful to this branch of medicine for contributing to the progress being made in all phases of surgery.

SIGMOID DIVERTICULITIS

The differential diagnosis between sigmoid diverticulitis and malignancy is not always easy. An alteration in stool habits and in the character of the stool is found in both conditions. I would urge you to be more specific in your questioning with respect to the character of the stool. If the patient has been having a foul malodorous stool, with or without gross blood, one should suspect malignancy. The constant absence of either fresh or old blood in the stool favors the diagnosis of diverticulitis. Both carcinoma and diverticulitis may be accompanied by lower abdominal colic, tenderness, leukocytosis and fever. Proctoscopy should be performed more frequently when the differential diagnosis between malignancy and diverticulitis is considered. Barium enema should be a part of this investigation· but it should be deferred until proctoscopic examination has been made.

The surgical treatment of diverticulitis complicated by obstruction, tumor mass, or abscess and fistula is not readily outlined, but I should like to discuss some phases of these complications of diverticulitis. In the past· we have frequently been advised to perform simple colostomy anywhere in the transverse colon when we are dealing with these complications. We have been advised to close the colostomy later when the clinical course and barium enema indicate that the inflammatory process has resolved. In many instances, there is increasing evidence to support the contention that this is not an acceptable course to follow. Recurrence of the diverticulitis and the attendant complications is not unusual. I would, therefore, strongly urge you to specifically perform an exclusion type of colostomy in the right half of the transverse colon as the initial procedure when you are dealing with obstruction, tumor mass, abscess or fistula. Drainage of an abscess at the same time is advised. A colostomy so located is far enough proximal to the involved area that subsequent surgery is not handicapped in any way. After a suitable interval of resolution and improvement at the site of infection, one may resect the involved portion of the bowel, close any visceral fistula, and do an end to end anastomosis between the descending colon and the rectosigmoid. Simultaneous or delayed closure of the proximal colostomy is dependent upon the status of the patient and the experience of the surgeon. It is being repeatedly demonstrated that resection is a better method of handling these patients than that followed heretofore. Recurrence of obstruction, tumor mass, abscess and fistula can be avoided if this segment of bowel is resected under these favorable circumstances.

SUMMARY

I would like to again point out that many topics have been omitted from this discussion.

The changing trends in the surgical management of colon and rectal disease have been observed with interest and profit in our offices. Some of these have been presented because it is felt that they also constitute some of the problems encountered in general practice.

YOUR STAKE IN INDUSTRIAL MEDICINE

Every patient is affected either directly or indirectly by jobs and wages. Sitting at a desk in a bank is a job just as surely as standing at a lathe or a boring mill. The effect of poor adjustment to a job may be even more damaging to a wife or child than to the worker in question. You, therefore, have a stake in industrial medicine whether you want it or not.

Where industrial medicine is practiced well it deserves your support. Where it is practiced poorly and improperly it deserves your constructive criticism more than your condemnation. Where medical supervision of workers is nonexistent your scorn of management that is unwilling to provide it should be followed by your help in showing how it can be obtained.

The working man spends forty or more of the one hundred and sixty-eight hours in a week at his job. You cannot disregard this period, and your patient cannot afford to have you do so. Where good industrial medicine exists, cultivate it, get in the habit of using it, learn the ways in which it can help you to get your patients well and keep them that way. Accept the challenge of the missionary work needed to improve industrial medicine and extend its benefits to an ever-increasing number of working men and women, who, incidentally, are your own patients.—Thos. L. Shipman, M. D., in New England Journal of Medicine.

PREGNANCY AND LABOR COMPLICATED BY HEART DISEASE*

By WALTER K. YATES, M. D.
Huntington, W. Va.

The diagnosis and proper treatment of heart disease in pregnancy constitute an important obstetrical problem. Stander has stated that cardiac disease accounts for 10 per cent of all maternal deaths. Only three other complications of pregnancy, namely, infection, pulmonary complications and postpartum hemorrhage rank higher as causes of maternal mortality. It has been stated that intelligent cooperation between the obstetrician and the cardiologist can reduce the potential mortaltiy to 4 per cent of that found in untreated cases.

The physiologic changes in the cardiovascular system during pregnancy necessarily place an increased load on the heart. These changes are sometimes difficult to evaluate and some are only suspected rather than thoroughly understood.

The increase in weight is partly responsible for added cardiac output. In addition, the center of gravity is shifted, gradually placing greater strain on the muscles of support and locomotion. As the uterus approaches full term size, it displaces other organs and makes their function more difficult. These changes are hard to evaluate but their existence cannot be denied.

An increasingly larger vascular bed is formed in the placenta. At this point the vessels are large and tortuous and arteriovenous shunts are myriad.

Plasma and blood grow continually greater in volumne until the thirty-sixth week of gestation when the blood volume is 45 per cent above normal. It decreases to 30 per cent above normal at term returning to normal during the puerperium. The proportionate increase in blood volume is greater than the addition in body mass. As the viscosity increases, the hematocrit reading also rises. All of these facts make the blood harder to propel.

We are aware that the endocrine balance is disturbed, that androgens and estrogens are retained. This fact may account in some measure for the retention of sodium chloride and water during pregnancy although the theory has not been proved.

The oxygen requirement is elevated 15 to 25 percent, which again is out of proportion to the gain in weight. Therefore, we must postulate a decrease efficiency in the utilization of oxygen.

The venous pressure of the legs is increasd during gestation as evidenced by the occurrence of varicosities and by directt measurement. The arterial blood pressure, however, is so variable in many large series of cases that no definite statement can be made about changes.

As a result of these various physiologic demands for greater cardiac effort, certain changes occur in the heart itself. Beginning with the twelfth week of gestation, an appreciable increase in cardiac output begins which continues at a slow rate until the twenty-fourth week of pregnancy. From this point to the thirty-sixth week, an accelerated rate of cardiac output is required. Following the thirty-sixth week, cardiac output is gradually decreased until term. At the point of maximum output the heart propels 40 to 50 per cent more blood each minute than it does in a non-pregnant individual. It is obvious that this increase is greater than that of oxygen consumption and is, therefore, another evidence of decreased efficiency. There are two methods by which the heart can increase minute volume. One is by an increased rate and the other is by increasing the stroke volume. Both of these mechanisms are used.

The heart size, as visualized roentgenographically, is seen to enlarge and the organ assumes the horizontal position. It is impossible to determine by x-ray whether this increase is due to dilatation or hypertrophy. It is dfficult to settle this point at post mortem examination because of the wide variance in heart weight and the scarcity of human hearts. Animal experimentation in this respect has yielded equivocal results.

Certain systolic murmurs are likely to appear in the healthy heart during cyesis. These murmurs are most commonly heard at the apex or at the base. The etiology of such functional murmurs may be the increased blood volume or stretched valvular rings. One should be careful not to classify such functional murmurs as evidence of cardiac disease.

Electrocardiographically, certain changes have long been evidenced in normal pregnancy, namely, the appearance of a Q wave in lead III. This change is most probably positional. With the advent of unipolar leads and their common usage, we shall doubtless explore these changes more accurately.

The onset of labor adds more strain to the already burdened heart, not the least of which is the emotional excitement concomitant with that phase of pregnancy. During labor, the systolic and diastolic blood pressure are elevated

*Presented before the Cabell County Medical Society, at Huntington, February 10, 1949.

with each pain. The venous pressure also is elevated by the action of the uterus which compresses its vascular system expelling blood into the peripheral circulation. It has been postulated that cesarean section is the procedure of choice in avoiding this added strain on the cardiovascular system. Lately, however, this view has fallen into some disrepute and section is being used much less frequently by those who are studying the subject. Admittedly, it is impossible to present a large and adequately controlled series of both procedures.

It is known that postoperative collapse is an all too frequent sequela of cesarean section. It is obvious, however, that no accurate appraisal of this method can be made until the effect of major surgery on cardiac patients is fully understood. Finally, it can be said that congestive failure during labor is rare in patients who have tolerated pregnancy well.

In view of these facts, it is desirable to appraise each patient soon after conception and to separate those who can from those who cannot safely carry their pregnancy to term. The appraisal must be modified at times, because of the patient's overwhelming desire to have a living child, or because of her religious convictions. It is especially desirable to allow a young primipara to continue her pregnancy. Primarily, because of the low mortailty which is encountered in young patients and, secondarily, because the disease is likely to progress and make future pregnancies more difficult. Appraisal and management are facilitated by the following classification of heart disease suggested by the New York Heart Association.

Class I. Patients with cardiac disease but no limitation of physical activity.

Class II. Patients with cardiac disease and slight limitation of physical activity. (Patient is comfortable at rest but is unduly fatigued by normal physical activity).

Class III. Patients with cardiac disease and marked limitation of physical activity. (Comfortable at rest but have palpitation, breathlessness, or anginal pain or less than normal activity).

Class IV. Patients with cardiac disease who are unable to carry on any type of physical activity without discomfort. (Symptoms of cardiac insufficiency are present at rest).

In broad terms 85 per cent to 90 per cent of obstetric patients with cardiac pathology fall into classes I and II. Patients in these two groups usually do well during pregnancy and delivery. The classification serves as a valuable although not infallible indication of prognosis.

The classification of cardiac disease according to etiologic type is also necessary in evaluating the patient's probable course and treatment. Rheumatic heart disease accounts for approximately 90 per cent of pregnant patients with organic heart disease because it is the most common cardiac disorder in the child bearing age. Actually, the mortality rate in these patients is usually set at 2 per cent to 3 per cent which is three times the average maternal death rate. About 70 per cent of deaths in this group result from progressive heart failure. This condition may predispose to other complications such as embolic events, pneumonia and puerperal sepsis. This event is most likely to occur between the sixth and eighth month. Specific considerations in the evaluation of a rheumatic heart must include the following:

1. Heart size. Gross enlargement of the heart is usually an indication of considerable myocardial damage and must be investigated electrocardiographically. This condition is usually considered of serious prognostic significance.

2. Active rheumatic infection. When active myocarditis is present the outlook is poor. Such activity may be difficult to determine due to the physiologic elevation of the sedimentation rate in pregnancy.

3. Age of the patient. This is important for reasons already discussed, namely, the increasing danger encountered as age progresses.

4. Type of valvular lesion. Mitral regurgitation is not generally viewed with great alarm but mitral stenosis is a perilous condition in pregnancy. Mitral stenosis is characterized by a rough, blowing, crescendo, apical, diastolic murmur, acentuated pulmonary second sound and enlarged left auricle as seen radiologically. If aortic valvular lesions are present the outlook is especially ominous. Those lesions constitute a definite contraindication to pregnancy if the patient has had an episode of congestive failure. It has been said that mitral stenosis patients who show no evidence of heart failure may have one baby without trouble. The second pregnancy introduces a chance for a circulatory breakdown. The third pregnancy usually is accompanied by severe failure and the fourth by certain failure and possibly death.

5. Auricular fibrillation. This condition complicating rheumatic disease invariably increases the prospective mortality and requires careful study. These patients should be strongly advised against pregnancy, especially in view of previous congestive failure.

Subacute Bacterial Endocarditis.—This condition in connection with gestation was, until quite

recently viewed as catastrophe. It is now possible to treat the patient with this disease during pregnancy since antibiotics do not endanger cyesis or the infant in utero.

Hypertensive Heart Disease.—This condition may occur during pregnancy or it may be present prior to conception. In either case it may quite possibly be and often is aggravated by pregnancy. Usually a patient with a systolic pressure of 160 to 180 and a diastolic pressure of 90 to 100 may be allowed to continue her pregnancy. This should be done after acquainting her with the potential dangers. In the event of retinitis, as determined by fundoscopic examination (hemorrhages, exudates, et cetera) termination of the pregnancy is strongly advised.

Syphilitic Heart Disease. — Cardiovascular syphilis without gross aortic insufficiency is not considered to be a contraindication to pregnancy. Under no circumstances should a patient with aneurism or with a history of congestive failure be allowed a term pregnancy.

Coronary Disease.—This entity generally is considered to be a definite contraindication to pregnancy and usually requires therapeutic abortion.

Cor Pulmonale.—Since the lungs generally are considered to be at comparative rest during gestation, *cor pulmonale* is not considered a contraindication to term pregnancy, especially in the absence of congestive failure. These patients usually are quite comfortable during pregnancy.

Congenital Heart Disease.—Much has been written about these conditions and their importance is not to be ignored; however, the occurrence of congenital heart lesions in pregnant women is rare. Generally speaking, the acyanotic group tolerates pregnancy well, with the exception of coarctation of the aorta. The cyanotic group should in no case be allowed to conceive or to carry a pregnancy to term.

Disturbances of Cardiac Rhythm and Conduction.—Some patients exhibit a tendency toward paroxysmal auricular tachycardia during pregnancy while others may be completely free from attacks. This condition is usually of a benign nature and seldom embarrasses the pregnancy. Digitalis or strophanthin may be used when circulatory distress ensues. Most observers agree that quinidine should be avoided during pregnancy because of its oxytocic effect.

Extrasystoles are annoying but usually not dangerous during pregnancy. Digitalis is of little help and the physician must rely on sedation and reassurance.

Auriculoventricular block is a rare entity in pregnancy and is usually not troublesome *per se.*

Bundle branch block usually is evidence of severe heart damage and should be evaluated with reference to the etiologic condition.

In the light of the foregoing, facts, the consulting cardiologist would be wise to insist on hospitalization when evidence of cardiac pathology first appears. During the hospital stay he may properly evaluate the extent of the existing lesion, the state of the myocardium and the available cardiac reserve, and may outline the course of treatment.

He should be on guard for congestive failure which is most likely to occur during one of three periods:

1. During the fourth and fifth months, corresponding to the formation of the placenta. At this time an arteriovenous fistula is formed which may overtax an already burdened myocardium.

2. During the seventh and eighth months when the cardiac load reaches its peak.

3. During labor when a sudden tremendous load is thrown on the diseased heart.

There are certain general measures which if followed in the less severe cases, may be sufficient to control the disease, especially classes I and II. These are as follows:

1. Low calorie, low salt diet.

2. Avoidance of excessive weight gain; weight increase in excess of twenty pounds should be rigorously avoided.

3. Protein should be given freely in the diet. This may prevent hypoproteinemia with subsequent edema and increased cardiac load.

4. Ferrous sulfate should be given in the amount of 6 grains three times daily to prevent the anemia of pregnancy.

5. Tight abdominal supports should be prohibited.

6. Nonessential activity should be restricted and regular rest periods should be observed.

7. Of paramount importance are the regular weekly checks of blood pressure, pulse, urine and the general state of cardiac compensation.

8. Finally, mental and emotional reassurance are most important.

In the advent of cardiac failure as evidenced by dyspnea, cough, edema of the ankles, basal rales and hepatic congestion, more drastic measures must be instituted:

LIBRARY OF THE
COLLEGE OF PHYSICI

1. Absolute and complete bed rest is imperative.

2. Hospitalization is desirable.

3. The general measures previously listed must be observed.

4. Digitalization is indicated. If the failure is rapid and fulminating or if it occurs during labor, intravenous strophanthin is the drug of choice.

5. If the response to these measures is unsatisfactory and the pregnancy is in the first trimester, therapeutic abortion must be considered. Patients in the second and third trimesters are not as likely to be benefited by this measure as are those in the first. Thirty-one per cent and 46 per cent of the patients in classes III and IV, respectively, will require therapeutic abortion.

At term, every effort should be made to allow the patient to deliver with as little exertion as possible. As previously mentioned, cesarean section is losing favor as a method of allowing an effortless delivery. Both Gorenberg and Stander feel that heart disease *per se* is not an indication for section. Although a large, well controlled series is not available, Gorenberg has reported a maternal mortality rate of 6.9 per cent in patients undergoing section for this reason while those who are delivered vaginally show a mortality rate of 1.2 per cent.

Antepartum digitalization of all patients in classes III and IV is strongly advised. Then under ether or regional anesthesia, the baby should be delivered by episiotomy and forceps at the beginning of the second stage. These measures tend to reduce the maternal exertion to a minimum during the second stage.

Following delivery, the question of sterilization in the more severe types naturally arises. This is to be considered only when it is certain that the woman should have no more pregnancies and the possibility of remission or cure is considered remote. Stander feels that sterilization is justified in 50 per cent of patients in class III and in all patients in class IV. Levine, however, takes a more conservative view.

Two points should be mentioned which I feel may add greatly to the physician's insight into this problem. Dressler states: "Prognostic considerations should not neglect the fate of the infant. While well compensated heart disease does not seem to influence the viability of the fetus, congestive failure has a decided tendency to cause premature birth or stillbirth, the resulting infant mortality running as high as 80 per cent." And finally, it must be said that no set system of rules can apply to every case as is true in any branch of medicine. However, no other problem in medicine so often demands that the patient's desires be strongly heeded and sound clinical judgment willfully ignored.

BIBLIOGRAPHY

Dresser, William: Clinical Cardiology, Paul B. Hoeber, 1942.

Gorenberg H.; Rheumatic Heart Disease, Controllable Complication, Am. J. Obst. & Gynec. 45:835-840 (May) 1943.

Jenson, J.: Heart Disease and Pregnancy, Modern Concepts of Cardiovascular Disease, vol. 18: no. 1.

Levine, Samuel A.: Clinical Heart Disease, W. B. Saunders Co., 1945.

Mendelson, C. L.: Management of Delivery in Pregnancy Complicated by Serious Heart Disease, Am. J. of Obst. & Gynec. 48:329-338 (Sept.) 1944.

Semisch, C. W.: Symposium on Recent Advances in Obstetrics; Management of Cardiac Patients, Med. Clin. North America 29:1449-1453 (Nov.) 1945.

Stander, H. J.: Williams Obstetrics, D. Appleton-Century Co., 1941

Stander, H. J.; Treatment of Heart Disease, Am. J. Obst. & Gynec. 44:714-722 (Oct.) 1942.

Turino, T. R., & Wallace, J. T.: Resume of Cardiac Disease for a Five Year Period, Am. J. Obst. & Gynec. 45:526-529 (March) 1943.

INTRA-ORAL CANCER

The signs of intra-oral cancer are the signs of cancer anywhere in the body, either a palpable or visible tumor mass or a palpable or visible ulceration on mucosal surface. The other additional sign which may be of value in this area is that of leukoplakia. This is a thick, whitish, elevated lesion. It can become malignant without showing actual ulceration. In fact, it may not be until the cancer within the leukoplakic area has become reasonably advanced that ulceration takes place. Leukoplakia can occur anywhere within the oral cavity and must always be considered a precursor of cancer.—Calvin T. Klopp, M. D., in Medical Annals of the District of Columbia.

INDUSTRIAL HEALTH SERVICE

For the past few years nearly every union contract written, of which there are thousands written annually, contains some sort of health clause requiring the provision by management of health service in some form. This demand has occurred so suddenly and on such a scale that the medical profession is caught flat-footed, wholly unable to meet the demand. America has seen a need for a type of medicine which the profession itself failed in large measure to anticipate.—Wm. F. Ashe, M. D., in Ohio St. Med. J.

AESCULAPIUS AND HIS DAUGHTERS

We are told that Aesculapius, God of Medicine, had two daughters. Hygiea, though not a spectacular beauty, is virtuous and a perfect helpmate. Medicine has taken her to its heart. The other daughter, Panacea, is a high bosomed beauty, the kind that leads men astray. Whether she comes bearing a cornucopeia of endocrine tablets or a sheaf of bureaucratic paper forms, beware of her advances.—Peter Pineo Chase, M. D., in Rhode Island Medical Journal.

TUBERCULOSIS ABSTRACTS*

TUBERCULOSIS AMONG COLLEGE STUDENTS

Modern tuberculosis case-finding techniques applied to groups of apparently healthy people are productive of important, instructive and often startling results. Active and communicable cases of tuberculosis are not infrequently found where there is no other evidence that anything is amiss. Fortunately, the majority of cases so discovered are in an early or a minimal stage of the disease, when the chances for rapid, complete recovery are best.

To no other population group are the above statements of more importance than to college students. These young men and women are at the highest level of health, strength and vigor and from their ranks are recruited leaders for the various fields of human endeavor. From their ranks are also recruited many cases of tuberculosis.

For 17 years the Tuberculosis Committee of the American Student Health Association has been promoting interest in tuberculosis among the institutions of learning in the United States. For more than 10 of these years, all colleges have repeatedly been urged to develop a tuberculosis control program, and many have, although in some colleges tuberculosis still is not recognized as a serious threat to students.

The curve of college participation has shown an almost constant upward trend. For reasons that are not entirely clear, the 1947 returns show fewer programs reported. Each of the 885 institutions to which a questionnaire was sent was asked to return the questionnaire but only 311 replies were received, of which 259 reported a program.

In spite of lessened returns many cases of tuberculosis were discovered among college students. The total number of cases, presumably of the "re-infection" type, reported for 1946-47 was 630, and all but nine were found at colleges having anti-tuberculosis programs. In 1946-47, 590 arrested cases of tuberculosis were again permitted to resume their college work. They emphasize the fact that "they do come back."

Programs Employing the Tuberculin Test and X-ray of Reactors

Colleges depending primarily upon the tuberculin test as their initial screening method numbered 105. Based on adequacy of data submitted, apparent proportion of student body tested and number of reactors x-rayed, 24 programs were roughly classified as "excellent," 34 as "good," 33 as "fair" and 14 as "poor." A college has an "excellent" program when entering students are tuberculin tested and reactors among them x-rayed, and when, each year, upper classmen non-reactors are retested and reactors re-x-rayed.

In recent years an increasing number of colleges have reported the use of both the tuberculin test and the chest x-ray for all entering students. It is recommended that this combined procedure be employed wherever facilities permit.

For better results, and to insure greater uniformity, tuberculin testing should be done intradermally (Mantoux), using Purified Protein Derivative of tuberculin (P.P.D.) in two strengths. The first dose, prepared according to directions, is 0.00002 milligrams. If no reaction occurs after 72 hours a second dose of 0.005 milligrams is given. Equally dependable results may be obtained if Old Tuberculin (O.T.) is used. The first dose, injected intradermally, is 0.1 milligram. When no reaction occurs after 72 hours a second dose of 1.0 milligrams is given. Failure to react to the second dose of either P.P.D. or O.T. may be taken as evidence of freedom from tuberculosis infection.

Programs Using X-ray Alone as a Screen

The main criterion for an excellent program was that all students were x-rayed annually. When this is done, most of the significant cases of tuberculosis will be found in a relatively short time.

Forty-seven colleges, distributed over 23 state, indicated that part or all of their x-ray program had been conducted by either the local tuberculosis association or one of the official health departments. One of the limitations of the x-ray is that it gives no certain proof either of tuberculosis infection or tuberculous disease. Diagnosis may be made only after careful clinical study of a suspected case. Calcifications noted on chest films are not proof of previous tuberculous infection. Diagnoses have undoubtedly been ascribed to "healed childhood tuberculosis" when the true case was *Histoplasma capsulatum*. One who reacts to tuberculin should have regular examinations, including chest x-ray, for evidence of active tuberculosis. Conversely, except in a few well-recognized instances, the non-reactor does not have tuberculosis.

Program Participation by Non-Students

Students come in daily contact with other members of the college community which includes all of the college staff, the administration, the faculty and other employees. Any one of these may have tuberculosis. Students would have added protection if all college employees were examined.

Student health services are in the best possible position to inform vast numbers of young people about tuberculosis, and must be prepared to meet this challenge.

Tuberculosis Among College Students, Seventeenth Annual Report of the Tuberculosis Committee, Chairman, Max L. Durfee, M. D., American Student Health Association, for the Academic Year, 1946-1947, The Journal-Lancet, November, 1948.

TREATMENT AND REHABILITATION

Man's two greatest fears are invalidism and dependency. When a person first learns he has tuberculosis, he is suddenly confronted with these two overpowering spectres, and worry over one aggravates the other, thus creating a vicious cycle. These two problems are so mutually interdependent that for best and surest results both should be tackled simultaneously.

In order to prevent the patient from lapsing into a state of mental stagnation and from losing years of valuable time, to stimulate his lagging morale and to provide an added incentive to remain in the hospital until his tuberculosis is arrested, it is necessary to start him on the road towards his rehabilitation almost simultaneously with the medical treatment.—Arnold Shamaskin, M. D., in Diseases of the Chest.

*Issued monthly by the National Tuberculosis Association and furnished through the courtesy of The West Virginia Tuberculosis and Health Association.

The President's Page

"On to The Greenbrier" should be the slogan of every member of our Association. A good attendance at our annual meeting means the success of the scientific program and of the efforts of organized medicine in our state.

The problems that will confront us at this meeting are the most important in our history. In this critical period, our State Association can function only through the support that is given to it by each component society.

The "grass roots" of all organized effort by state and national medical associations is the county society. This is the principle on which the whole national educational campaign is based.

A membership in your county medical society carries with it a definite responsibility. It requires your attendance and your participation in all of its programs. It is the one qualification that is necessary for membership in our state and national associations.

In every society there is too much of a tendency for a small percentage of the members to have to do all of the work because the others are not interested, too lazy, or too mercenary to give the time and the effort that is necessary to be leaders. This is not a healthful condition for organized medicine because right now we need every member on the firing line.

Your officers will welcome suggestions and constructive criticism. Lack of unity however can easily wreck our whole program. Personal ambitions and factions that have developed in some of our societies must be set aside if we hope to succeed.

The financial support and time that each individual member of a component society gives to our educational program against socialized medicine determines its success. This is your fight and the battle has not been won. It can and must be won if we are to preserve our freedom, but it can be won only if you give your financial support and time.

These critical times demand your individual attendance at our annual meeting. The scientific program is most excellent. The social activities have been well planned. There is no excuse to stay away.

See you at The Greenbrier.

Thomas G. Reed.

President.

West Virginia Medical Journal

Official Journal of
The West Virginia State Medical Association
302 Atlas Building, Charleston, West Virginia

Editor

Walter E. Vest, M. D. (1951) ..... Huntington

Managing Editor

Mr. Charles Lively ..... Charleston

Associate Editors

W. M. Sheppe, M. D. (1949) ..... Wheeling
Edward J. Von Liere, M. D. (1950) ..... Morgantown
G. G. Irwin, M. D. (1952) ..... Charleston
R. H. Edwards, M. D. (1953) ..... Welch

Editor Emeritus

James R. Bloss, M. D. ..... Huntington

Business Manager

Mr. Charles Lively ..... Charleston

Published monthly on the first day of the month, at Charleston, by The West Virginia State Medical Association.

Original articles are accepted on condition that they are contributed exclusively to the Journal.

Advertising rates furnished upon request. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the American Medical Association.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston 24, West Virginia. Telephone, Capitol 34-625.

HOMECOMING

There should be no hesitation on the part of any member of the West Virginia State Medical Association about attending the annual meeting at White Sulphur Springs. This is not just another meeting. It is a real "homecoming" for the doctors of this state. The assistant manager at The Greenbrier, George O'Brien, known and loved by hundreds of our members, has emphasized the fact that the management at this famous resort is more than bending over backwards to help make the meeting a success. Certainly, there has been the fullest cooperation in attending to the many details incident to the successful conduct of a large state meeting.

The Greenbrier is a little different than The Greenbrier of a few months ago, when the management, composed of top hotel men of the country, undertook to get the resort ball rolling. There were many headaches. Many organizational bugs had to be ironed out. The Greenbrier staff has now succeeded in molding together a smooth running organization. The personnel is the best that can be obtained. The food is tops. Recreation facilities available supply the needs and satisfy the wants of the young and old. In fact, it is just impossible to feel old or be old at The Greenbrier. So much for what The Greenbrier has to offer.

If, in addition to recreation and relaxation, our members are really interested in listening to a scientific program that has merit, with speakers who are in demand at all times, they cannot afford to miss this 82nd Annual Meeting.

A glance at the program printed in this issue of The Journal will suffice to convince the most exacting of our members that Paul Revercomb, John Barker and Carl Johnson have succeeded in providing a scientific program which any state or national medical society would be proud to present.

Everything considered, we can't afford to be absent when the roll is called on August fourth. And, the advance registration indicates that our members will be there—from our rural and industrial areas, from the smallest towns to the largest cities.

Three of the most interesting days of a lifetime lie ahead and we don't have to go away from West Virginia to find the end of this medical rainbow.

ANTHRACOSILICOSIS

The problem of anthracosilicosis is becoming more and more prominent as industrial medicine progresses, and, certainly so far as West Virginia is concerned, the welfare program of the United Mine Workers has accentuated it very materially. The various phases of the disease were presented to our state profession at the recent meeting held in Charleston, sponsored by the West Virginia membership of the American College of Chest Physicians. Likewise, at the recent meetings in Atlantic City it was prominent on the program of the College of Chest Physicians and especially on that of the section on Industrial Medicine of the A. M. A., where an entire morning was devoted to dust diseases.

Accordingly, our publication committee has decided to issue an anthracosilicosis number in November. The scientific articles will be furnished by Dr. Burgess Gordon and his associates at the Barton Memorial Hospital of Jefferson Medical College. These papers will evaluate all the recent research on anthracosilicosis and miners' dyspnea and present a summation of the present knowledge of these subjects.

CLEAR THINKING

Walter Stuart, editor of the West Union Record, long considered one of the best weekly newspapers published anywhere in the country, makes known in no uncertain words that he is opposed to everything that smacks of socialism or communism. He believes that there is little if

any difference between the two, and he is opposed to compulsory health insurance because it is "contrary to every principle upon which this nation was founded."

Editor Stuart has been an institution in himself in Doddridge county and West Virginia for many years. His editorials which appear in the Record have been reproduced by other newspapers over the country as outstanding examples of clear thinking expressed in understandable language. He has always been fearless in his views in matters affecting the state and the nation.

Now Editor Stuart has come forward with his own reasons for opposing compulsory health insurance. Because the views he has expressed are so interesting, and because what he has had to say in the lead editorial of the June 16 issue of the Record is so important to the members of the medical profession, we are reproducing the editorial in its entirety.

Here is what Walter Stuart thinks about socialized medicine:

> We are opposed to socialized medicine or compulsory health insurance because we are opposed to regimentation; because we are opposed to Socialism and Communism and everything and anything that savors of Socialism and Communism; because we are opposed to being forced to do things which we do not want to do; because we believe that every individual should order his life to suit himself or should have the privilege of doing as he pleases so long as he does not interfere with the rights and privileges of somebody else or so long as he confines his life and activities within the limits of the law; because we are a Jeffersonian Democrat and believe that the least government is the best government.
>
> If we were a Lincoln Republican we would oppose socialized medicine for all the reasons aforementioned, for the principles of Jefferson and the principles of Lincoln were not far apart; they did not differ essentially in fundamentals; most of the principles of Lincoln were based on the principles of Jefferson.
>
> Compulsory health insurance or socialized medicine is a long step in the direction of a socialistic state, the kind of government toward which the people of this nation are fast being carried. Compulsory health insurance is certainly contrary to every principle upon which this nation was founded; it is contrary to all the declarations and teachings of the founding fathers. But it is one of the fundamentals of a socialistic state, and that, of course, is why it is being so vigorously pushed by those who are striving to make America a socialistic state. No good Democrat and no good Republican can believe in such a thing as compulsory health insurance. It is true that many persons claiming to be good Democrats and many persons claiming to be good Republicans are in favor of compulsory health insurance, but they are not what they claim to be; they are Socialists and Communists. That is exactly what they are although they do not believe they are and would bitterly resent being called Socialists and Communists.
>
> The fact is that some of the biggest men in the government are Communists at heart. Of course, they do not call themselves Communists and no doubt they believe they are not Communists, but they advocate Communist principles and are doing far more to advance the cause of Communism in this country than Stalin and all his Russians. They believe in socialized medicine, in cradle-to-the-grave social security, in government ownership of most of the public utilities, in use of the income tax to equalize all incomes, in public housing, in Federal grants-in-aid, in government price support in order to keep prices on certain products at or above a certain level, and in everything else looking toward the socialized welfare state. Some persons may call them Socialists rather than Communists. The fact is that there is little if any difference between Socialism and Communism. Well, whatever they are, they are not Democrats and they are not Republicans.
>
> The adoption of socialized medicine will mean the creation of another great government bureau employing many thousands of persons. Some one has estimated that it will require more than a million employees to handle the clerical work of socialized medicine. It would require the services of a vast number of employes because a record of every person would have to be kept on file and every physician would have to send in to the bureau at Washington the data on every case treated by him. Much of the time of a physician would be consumed in filling out forms or making reports and complying with all the other regulations of red tape.
>
> Socialized medicine will retard the progress of the medical profession rather than promote its progress. So much of the time of a physician will be employed in matters that will have nothing to do with the study and practice of medicine. Bureaucratic red tape will consume a great deal of his time. Many a young person will be discouraged from entering the medical profession because of the great amount of extra work without adequate compensation that will be required of a physician as a result of socialized medicine.
>
> But socialized medicine should be opposed chiefly because of its regimentation features. Regimentation has no place in a democracy. Regimentation and democracy cannot exist together. They have nothing whatever in common.
>
> The regimentation features of socialized medicine should alone be enough to make it highly obnoxious to every freedom-loving American citizen, to say nothing of its enormous cost, running up into several billion dollars every year, and its many other objectionable features.
>
> There could not possibly be any government handout, favor or largess that could justify the people in sacrificing their freedom or any part of it. No person with the spirit of Patrick Henry, who cried out, "Give me liberty or give me death!" would exchange his freedom for anything or for all the things the government could offer him. Such a person would rather enjoy his freedom, even if he had to live in poverty, than to be supported in ease and luxury by the government upon condition that he be denied the privilege of exercising the rights of a free citizen or that he become a government ward and do only what the government permitted him to do.

EXPERIMENT IN McDOWELL

The latest demonstration project of the state department of health, a course in human relations in the McDowell County schools, has proved to be a success. Operation of the first term of the project, carried on cooperatively with

the state department of education, was completed late in May.

Beginning in January, 1949, more than 100 class rooms in the fifth to ninth grades in McDowell County were assigned the services of a trained consultant in mental hygiene for public schools. Two lessons were given each week so that course No. 1 could be completed the first year. The object of this course is to teach children how to get along with themselves and others by helping to develop the ability to make and keep friends, meet unexpected changes, assume responsibility, make decisions, and "face up" to their fears.

The theory on which these classes operate is that little can be learned about personal problems except through personal experience, and that ordinary teaching or lecturing falls far short in providing the kind of insights that come out of life encounters with emotional and personal problems.

Few pupils are reticent when they hear their classmates speaking up around them. Shy children who have little to say on other subjects sometimes excel at giving examples of "problems," thus achieving a pleasant feeling of importance. The airing of difficulties does a lot to relieve tensions in many pupils.

McDowell County is the first in West Virginia to experiment with this course on such a large scale. The state of Delaware has been using it for the past five years under the direction of Colonel H. Edmund Bullis. Mrs. Hess Farmer, the consultant for West Virginia, was trained under Colonel Bullis.

Not only did the 4,602 pupils participating receive valuable assistance in developing happy and wholesome attitudes that will enable them to get along better with themselves and others, but the 99 teachers of these pupils were able to get a better insight into the children's lives, thereby being better able to teach them.

McDowell County is being used to give the program a complete trial before attempting it in other counties. The program, which has the complete support of the county superintendent of schools, will be broadened in 1950 to include most of the 165 classrooms in the county.

ONE-SENTENCE EDITORIAL

The individual practitioner will, within the immediate future, immortalize or abolish the private practice of medicine.—J. Arkansas Med. Soc.

Most of the benefits from streptomycin in tuberculosis appear during the first month of treatment.—W. S. R. in Detroit Medical News.

GENERAL NEWS

SCIENTIFIC PROGRAM ONE OF BEST EVER ARRANGED FOR ANNUAL MEETING

Arrangements for the 82nd annual meeting of the West Virginia State Medical Association at The Greenbrier, White Sulphur Springs, August 4-6, have just about been completed. All of the spots on the scientific program were filled by the middle of June, and the list of speakers who have accepted invitations to appear on the three-day program reads like a Who's Who in Medicine. The complete program appears elsewhere in this issue of The Journal.

The scientific work committee deserves much credit for doing a splendid job. This committee is composed of Dr. Paul H. Revercomb, of Charleston, chairman; and Drs. J. F. Barker, of Huntington, and Carl E. Johnson, of Morgantown.

Three General Sessions

Three morning general sessions have been arranged, leaving the afternoons clear for meetings of sections and affiliated societies. General sessions will start at

Thos. G. Reed, M. D.

ten o'clock and end at one o'clock on Thursday and Friday. The Saturday morning session is scheduled to begin at nine-thirty so as to provide sufficient time for the four speakers who will appear on the program that day. Sessions of the House of Delegates will be held on Thursday and Friday afternoons. These sessions will probably begin at four o'clock. The election of officers is scheduled for the Friday session.

Night Meetings

Dr. Thomas G. Reed, president of the State Medical Association, will deliver his presidential address at an

evening session on Thursday. Mrs. W. E. Hoffman, president of the Auxiliary, will also appear on this program.

Dr. Harold C. Leuth, Dean of the University of Nebraska School of Medicine, will be the guest speaker at a meeting scheduled for Friday evening. His topic will be, "Medical Care in the Atomic Age." This will be an open meeting arranged for doctors and their wives and guests who attend the convention.

Section and Society Meetings

Most section and society meetings will begin at 2:30 o'clock each afternoon. Arrangements for these meetings will be completed by officers of the organizations, and there will be no set time for adjournment. This will enable sections and societies to provide time for discussion of papers presented by guest speakers. Heretofore, the meetings have been held during the luncheon period, and adjournment has had to be set for a specific time so that members could attend general sessions in the afternoon.

Unless a specific request is made, there will be no special breakfasts, luncheons or dinners. The management at The Greenbrier believes that much valuable time can be saved if all of the doctors, their wives and guests, are served at the usual hours in the main dining room and at the Casino.

Entertainment Features

Besides the golf and tennis tournaments there are abundant facilities for recreation. Horseback riding is one of the featured attractions, with good horses available for use on the miles of trails within The Greenbrier grounds. The swimming pool will be open each day, and there will be dancing each evening to the music of a Meyer-Davis orchestra.

Bingo and a Bridge tournament will be arranged by members of the Woman's Auxiliary, and the game room will be available for play by groups mornings and afternoons.

Annual Banquet

The convention will be officially brought to a close with the annual banquet on Saturday evening. It will be served either in the main dining room or in the auditorium, depending upon the number of doctors and their wives who attend.

Dr. Will Durant, one of the best known lecturers and authors in America, will be the guest speaker at the banquet. This will mark Dr. Durant's first appearance as a speaker before the State Medical Association. His subject will be, "What are the Lessons of History?" Dr. Russel Kessel, of Charleston, will be the toastmaster.

Main Entrance of the Greenbrier at White Sulphur Springs

Dress Informal

Dress will be informal for the banquet and all other functions during the convention.

Advance Registration

For the first time, advance registration is being provided members of the Association. Cards are being filled out and returned to the headquarters office with check for $10.00, the registration fee, and registration of individual members returning cards will be completed before the convention.

The registration desk at The Greenbrier will be located just outside the auditorium, and will open Wednesday afternoon, August 3, at two o'clock. The desk will be open from 8:30 A. M. until 5 P. M. each day during the convention.

Heavy Reservation of Rooms

Reservations for rooms for more than 450 doctors and their wives have been made at The Greenbrier as this issue of The Journal goes to press. In addition, several rooms have been reserved at other hotels in White Sulphur Springs.

TENNIS TOURNAMENT ARRANGED

Plans have been completed for the tennis tournament to be held in connection with the 82nd Annual Meeting of the State Medical Association, August 4-6, at White Sulphur Springs. The tournament will be in charge of a committee composed of Dr. John Lutz, of Charleston, chairman, and Drs. S. L. Bivins, also of Charleston, and William M. Sheppe, of Wheeling.

The schedule of events includes mens singles and men's doubles, with a possible exhibition match to be played at the end of the tournament, in which it is planned to have the pro's at The Greenbrier participate. Tournament play will start on Thursday afternoon, August 4, and continue through Friday and Saturday, with play limited to afternoons. Suitable prizes will be awarded the winners in all events. Doctors who expect to play in the tournament are requested to mail entries immediately to the chairman, Dr. John Lutz, Atlas Building, Charleston, so that the schedule may be compleded without delay.

NEW OFFICERS FOR FORT HENRY ACADEMY

At a meeting of the Fort Henry Academy of Medicine held May 26 at the Wheeling Country Club, Dr. D. E. Greeneltch, of Wheeling, was elevated to the presidency. Other officers were elected as follows: Vice president, L. A. Lyon, Wheeling; secretary-treasurer, R. M. Sonneborn, Wheeling; program chairman, E. V. Arbaugh, Jr., Martins Ferry, Ohio; and program chairman elect, C. D. Hershey, Wheeling.

Nearly one hundred members and guests were present at the dinner meeting, which featured Dr. Benjamin L. Haylarr, of Philadelphia, as the guest speaker. His subject was, "Renal Tumors."

1950 AMA SESSION IN DENVER

The 1950 interim session of the American Medical Association will be held in Denver. The 1949 session is scheduled for Washington, D. C., Dec. 6-9.

HOUSE OF DELEGATES TO CONSIDER CREATION OF NEW HEALTH BUREAU

At the regular spring meeting of the Council, held at Parkersburg, May 19, a resolution, submitted by the Ohio County Medical Society, concerning the creation of a new bureau in the state health department charged with the responsibility of coordinating the programs of the various tax-supported and voluntary agencies in West Virginia, was unanimously adopted and the chairman was directed to bring the matter to the attention of the House of Delegates at the annual meeting at White Sulphur Springs, August 4-6.

The resolution is as follows:

The Ohio County Medical Society, realizing the high cost of hospital care and the shortage of hospital beds, appreciating the fact that degenerative diseases are on the increase due to the increased life expectancy, and feeling that something has to be done to alleviate this problem, submits the following resolution:

I. The Ohio County Medical Society believes that there is a great deal of merit in the establishment of a department in the State Health Department which will be charged with the responsibility of coordinating the programs of the various tax-supported and voluntary agencies in this state to the end that duplication of effort and red tape would be reduced to a minimum.

II. The Ohio County Medical Society believes that a home education and service program for the home care of the chronically ill in urban and rural districts can be developed under the leadership of the various city, county, and district divisions of the State Health Department which will go a long way to cut down the cost of hospital care and relieve in a measure the shortage of hospital beds.

III. Such a program to be developed on a fee for service basis, utilizing the personnel already educated in the care of the sick and in the cases of the indigent and medically indigent, this fee for service to be paid for by the tax-supported agencies charged with such care.

IV. Such a program to be endorsed and supported by the Council and House of Delegates of the West Virginia State Medical Association. To that end the Ohio County Medical Society feels that if such a program is endorsed by the State Medical Association it wil give an impetus and incentive for the newly organized State Health Department to set up such an administrative division. The Ohio County Medical Society believes that the State Health Department is the agency in the state of West Virginia which is responsible for the health of its people and is the logical agency to spearhead and bring about the collaboration and cooperation necessary for such a program.

DOCTOR DYER TWICE HONORED

Dr. N. H. Dyer, of Charleston, state health commissioner, was elected president of the West Virginia University Alumni Association at the annual meeting held in Morgantown in connection with commencement exercises early in June.

Doctor Dyer was also elected vice president of the southern branch of the American Public Health Association at the annual meeting held recently at Dallas, Texas.

GOLF AT WHITE SULPHUR

Dr. James S. Klumpp, of Huntington, chairman of the golf tournament committee, has announced that the following prizes will be awarded at the annual tournament at White Sulphur Springs in connection with the 82nd annual meeting of the West Virginia Medical Association, August 4-6:

Low gross (championship cup); low net; low putts; and blind bogey, one and two prizes.

Club handicaps must be furnished the golf tournament committee, and should be sent to Doctor Klumpp without delay. Those who expect to participate in the tournament must signify in advance the round for which his score will be used in competing for the prizes.

Tournament play will begin Thursday afternoon, August 5, and continue over Friday and Saturday, with play being limited to afternoons.

The tournament will be especially interesting this year because of the fact that Dr. R. R. Summers, of Charleston, and Dr. Charles E. Watkins, of Oak Hill, will be trying to win permanent possession of the championship trophy. Each has two legs on the cup, and the winner of three championship tournaments retains permanent possession of the trophy.

ANESTHESIOLOGISTS MEET

A one-day meeting of the West Virginia Society of Anesthesiologists was held May 15, 1949, at the Windsor hotel, in Wheeling. The following scientific program was presented at the afternoon session:

"Explosive Hazards in Anesthesia"—George J. Thomas, M. D., Director of Anesthesiology, St. Francis and University Hospitals, Pittsburgh, Pa.;

"Intravenous Procaine"—Robert L. Patterson, M. D., Director of Anesthesiology, Allegheny General Hospital, Pittsburgh, Pa.; and

"Curare"—Francis F. Foldes, M. D., Director of Anesthesiology, Mercy Hospital, Pittsburgh, Pa.

There was a general discussion after the presentation of each paper.

The following is a list of anesthesiologists from West Virginia, Ohio and Pennsylvania who attended the meeting: D. E. Greeneltch, president, Wheeling; John F. Morris, vice president, Huntington; A. B. Bowyer, secretary-treasurer, Charleston; Elizabeth McFetridge, Martinsburg; John Godbey, Charleston; N. H. Newhouse, Charleston; Lester D. Norris, Fairmont; Stanley Weinstein, Huntington; and Eldon B. Tucker, Morgantown.

RELOCATIONS

Dr. Karl A. Dillinger, of Weston, has accepted a surgical residence at Mercy Hospital, Baltimore, effective July 1.

* * * *

Dr. Gerald L. Morin, of Powellton, has moved to Jenkins, Kentucky, where he is in charge of the obstetrical department at Sharon Heights Hospital, in that city.

DR. WILL DURANT BANQUET SPEAKER AT ANNUAL MEETING AT THE GREENBRIER

Dr. Will Durant, eminent historian and philosopher and world-famous lecturer, will be the guest speaker at the banquet at the 82nd annual meeting of the West Virginia State Medical Association, at The Greenbrier, White Sulphur Springs, Saturday evening, August 6. His subject is, "What are the Lessons of History?"

Doctor Durant's "Story of Philosophy" was the first of his books to take scholarship in the average home. Since it first appeared in 1926, over two million copies have been sold, and it has been translated into twelve languages. Strangely enough, this famous book was a by-product of Will Durant's major interest and life plan. As far back as 1915 he had conceived the hope of completing a comprehensive story of civilization, and from that time he began to gather material for such work.

Dr. Will Durant

The success of "The Story of Philosophy" enabled him to devote himself almost exclusively to this long-cherished purpose. So far, three books have appeared: "Our Oriental Heritage," a history of Asiatic civilization from the beginning to 1935; "The Life of Greence"; and "Caesar and Cleopatra." All have won widespread acclaim.

Each of the three published books of "The Story of Civilization" is an independent work, able to stand alone as a full and rounded narrative-picture of every phase in a vital historic civilization. Each is a monument of patient scholarship transformed by a lucid style, a Gallic wit and a philosophic breadth of perspective and understanding.

Doctor Durant was born at North Adams, Massachusetts, of French-Canadian parentage. He received his

formal education in the parochial schools of that city, at St. Peter's College in Jersey City, and at Columbia University. He received his Ph. D. degree at Columbia in 1917, and taught philosophy at the same institution for one year.

In 1914, Doctor Durant began in a Presbyterian church in New York, those lectures on philosophy, literature, science, music, economics, biology and history which were followed by the three books of "The Story of Civilization."

Dr. Russel Kessel, of Charleston, has been named by Dr. Thomas G. Reed, president of the State Medical Association, as toastmaster for the banquet, and he will introduce Doctor Durant.

MILLIONS OF MAIL STICKERS READY

According to Leone Baxter, of the firm of Whitaker & Baxter, in charge of the AMA National Education Compaign, 25 million pieces of literature have already been mailed from the headquarters office in Chicago.

Already, over forty thousand doctors have ordered copies of the Fildes poster, "The Doctor," for display in their offices. The poster has proved to be very popular, and over ten thousand large-size copies have also been printed and mailed to doctors over America.

Over two million copies of the illustrated folder against compulsory health insurance have been printed, and sixty million stickers in colors are now being printed for distribution to doctors for use on envelopes mailed from their offices.

NEW FILM ON DIABETES

The State Department of Health has a new film on diabetes, "THE STORY OF WENDY HILL," for free distribution upon request.

The film presents the facts of diabetes in a dramatic and understandable way. It clears up many false ideas and points out the encouraging things about diabetes. Current studies indicate that there are more than one million Americans, young and old, who have diabetes and do not know it.

This 16mm Kodachrome 18-minute film is suitable for adolescent and adult groups. Requests for use of the film should be directed to the Bureau of Public Health Education, State Department of Health, Charleston 5, W. Va.

PR PRINTED MATERIAL AVAILABLE

All printed PR material, including the Fildes poster, "The Doctor," is now available and will be supplied by Whittaker & Baxter in any quantities desired by members of the West Virginia State Medical Association. A blank order card, addressed to Dr. Frank J. Holroyd, Chairman, Princeton, is enclosed with PR Newsletter No. 3, mailed to members June 22. Is is suggested that orders for needed material be placed without delay.

OPH. AND OTOL. ACAD. TO MEET WITH VIRGINIA

A joint meeting of the West Virginia Academy of Ophthalmology and Otolaryngology will be held with the Virginia Academy at The Greenbrier, White Sulphur Springs, May 7-9, 1950.

MRS. DANA T. MOORE TO BE INSTALLED AS PRESIDENT OF WOMAN'S AUXILIARY

Mrs. Dana T. Moore, of Parkersburg, will be installed as president of the Woman's Auxiliary to the West Virginia State Medical Association, at the 25th annual meeting, at White Sulphur Springs, August 4-6, 1949. She will succeed Mrs. W. E. Hoffman, of Charleston, who has served as president since the annual meeting at Huntington in May, 1948.

The meeting will be held at The Greenbrier conjointly with the 82nd annual meeting of the West Virginia State Medical Association. The formal opening is scheduled for Friday morning, August 5, at 9:30 o'clock, with Mrs. Hoffman presiding. The pre-convention meeting of the board will be held the afternoon of the preceding day, and the past president's breakfast, with Mrs. F. Carl Chandler, of Bridgeport, presiding, will be held in a private dining room at The Greenbrier Friday morning.

The annual luncheon in honor of the past presidents will be held at the Casino Friday at 1:00 o'clock, and guests will include the president of the State Auxiliaries in both Ohio and Pennsylvania. Other honor guests will include Dr. Thomas G. Reed, president of the State Medical Association, Dr. Thomas Bess, chairman of the Council, and Drs. John P. Helmick, William A. Thornhill, Jr., Frank J. Holroyd, Elizabeth McFetridge, and Edwin J. Humphrey, Jr., members of the State Advisory Board.

Mrs. David B. Allman

Mrs. David B. Allman, of Atlantic City, president of the Woman's Auxiliary to the American Medical Association, will install the new officers at a meeting scheduled for Saturday morning, at 9:30 o'clock, and

Mrs. Dana T. Moore's inaugural address will follow. Mrs. Allman and Mrs. Moore will be the honor guests at a luncheon to be held at noon, and adjournment that afternoon will be followed by a post-convention meeting of the board. The full program for the annual meeting is printed in this issue of The Journal.

Entertainment provided by the Auxiliary for members and their husbands will include Bingo and a bridge tournament.

The registration desk will be located in the Virginia Room and will be open each day during the convention.

NEARLY 900 MEMBERS PAY ASSESSMENT

Approximately 64 per cent of the members of the West Virginia State Medical Association had paid the AMA assessment as of June 20, 1949. According to figures compiled by the West Virginia State Medical Association, the assessment had been paid by 893 members as of that date.

Over 58 per cent of the members have paid the state voluntary contribution, the total as of June 20 being 814.

Three component societies have now gone over the top in the payment of both the assessment and the voluntary contribution. Marion reported a 100 per cent paid up membership during the past month, joining Mercer and Marshall, which hertofore reported that all of the members had paid both the assessment and state voluntary contribution.

WEST VIRGINIANS GRADUATE AT MCV

Nine West Virginians received degrees of doctors of medicine at the commencement exercises of the Medical College of Virginia held June 7, 1949 at the Mosque Theatre, in Richmond. The graduates are as follows:

Martin Samuel Goldfarb, Charleston; Ralph Edwards Haynes, Freeman; Herbert Chester Hoover, Williamson; George Thompson Hoylman, Buckhannon; Harold Oliver Kamons, Parkersburg; Jacquelyn Marie Kirk, Pineville; Harry Nenni, Huntington; Richard Samuel Stephens, Bluefield; and Clarence Vincent Townsend, Inwood.

There were 68 graduates in medicine and 31 in dental surgery. The graduates represented 23 states, the District of Columbia, Puerto Rico, Belgian Congo, Canal Zone, India and Venezuela.

The commencement address was delivered by Governor William M. Tuck, of Virginia.

REVOCATION OF LICENSE

The Public Health Council, at a meeting held in Charleston, May 12, 1949, revoked Dr. Richard Bent Engle's license, No. 6196, to practice medicine in West Virginia. The order entered by the PHC assigned as the reason for the revocation of the license the doctor's conviction of a felony charge. Doctor Engle was formerly located at Longacre, Glen White, and Beckley.

ADVISORY GROUP ON FOUR-YEAR SCHOOL APPOINTED BY GOVERNOR

Governor Okey L. Patteson has announced the appointment of an advisory committee to consult with a legislative interim committee concerning the advisability of establishing a four-year school of medicine and dentistry in West Virginia.

A resolution (SCR 9) was adopted by the Legislature at the regular session in 1949, setting up a legislative interim committee which is empowered to make a study of the problem and report back at the next session of the Legislature. The resolution authorizes the Governor to appoint an advisory committee, which is to include, as ex officio members, the president of West Virginia University, the president of the West Virginia State Medical Association, the president of the West Virginia State Dental Society, and the president of the West Virginia State Nurses Association.

The new advisory committee will be composed of Dr. Irvin Stewart, of Morgantown, president of the University, Dr. Thomas G. Reed, of Charleston, president of the State Medical Association, Dr. W. W. Curry, of Holden, president of the State Dental Society, and Leada Neininger, R. N., president of the State Nurses Association, all ex officio members; and Martha Wooddell, R. N., of Clarksburg, immediate past president of the State Nurses Association; Clarence Martin, Jr., attorney, Martinsburg; Dr. Donzie Lilly, Athens, immediate past president of the State Dental Society; Dr. D. A. MacGregor, Wheeling, chairman of the State Medical Association's fact finding committee; Dr. Thomas Bess, Keyser, immediate past president and now chairman of the Council of the State Medical Association; and John T. Johnson, Williamstown, master of the West Virginia State Grange.

Senate president W. Broughton Johnston, of Princeton, and House speaker William E. Flannery, of Logan, are co-chairmen of the legislative interim committee. The Senate members are Don J. Eddy, of Morgantown; Dr. Ward Wylie, of Mullens; A. L. Reed, of Newburg; and Theodore M. Bowers, of New Martinsville.

Mrs. Nell W. Walker, of Winona, Robert E. Roach, of New Cumberland, H. Hayden Morgan, of Adrian, and J. Allen Overton, of Parkersburg, represent the House of Delegates on the committee.

Besides considering the advisability of the establishment of the school, the survey will include a study of the matter of location. The committee is empowered to call upon any departments of the state government for detailed information, and is also authorized to summon witnesses and take testimony if deemed necessary.

DOCTOR BAILEY ON DENTAL PROGRAM

Dr. Russell B. Bailey, of Wheeling, president of the West Virginia Cancer Society, was a guest speaker at the second annual meeting of the Ohio Valley Academy of Dentistry, held at Oglebay Park, Wheeling, June 30. His subject was, "Public Health Aspects of Cancer." The other speaker, Dr. Hamilton B. G. Robinson, professor of Oral Pathology at Ohio State University, Columbus, discussed "Oral Cancer."

DRS. P. E. PRILLAMAN AND R. B. BAILEY MEMBERS STATE BOARD OF HEALTH

Governor Okey L. Patteson has announced the appointment of all the members of the new State Board of Health, which was created by the legislature under the provisions of H. B. 135, passed February 21, 1949. The bill was sponsored in the legislature by the West Virginia State Medical Association, and was passed by unanimous vote in both the Senate and House.

Dr. Paul E. Prillaman, of Ronceverte, was appointed a member for a nine-year term. Eight other members were appointed for terms as follows:

J. Stanley Turk, of Wheeling, hospital representative, eight years; Dr. Russell B. Bailey, Wheeling surgeon, seven years; E. O. Wiseman, Fayetteville pharmacist, six years; Mrs. Katherine M. Fisher, of Moorefield, citizen representative, five years; Dr. Roy W. Eshenaur, osteopathic physician of Pt. Pleasant, four years; William M. Jarrett, Charleston dentist, three years; J. C. "Dick" Evans, of Logan, citizen representative, two years; and Dr. P. R. Higginbotham, Bluefield physician, one year.

Dr. N. H. Dyer, present state health commissioner, will hold over as head of the state department of health. On July 1, his title will be changed to state director of health, and he will serve as the executive officer of the new state board of health. The new board, when organized, is authorized to appoint the director, who will serve for an indefinite period at the pleasure of the board.

SEEN ON THE BOARDWALK

Several former West Virginia doctors greeted old friends on the Boardwalk at Atlantic City during the AMA convention in June.

General Clyde Beck, commanding officer at Ashford General Hospital, White Sulphur Springs, during World War II, is now in charge of Kennedy Veterans Administration Hospital at Memphis, Tennessee. When Ashford was closed shortly before the property was returned to the C & O Railway Company, General Beck was transferred to Miami, and retired a few months afterward. After a short interval, he was named as head of the Veterans Administration hospital at Memphis.

* * * *

Dr. Curtis Artz, formerly of Grantsville, former president of the Academy of Medicine of Parkersburg, has been located in the office of the Surgeon General of the Army at Washington, since April, 1949. Doctor Artz, who is now a captain in the Medical Corps of the Army, is being transferred to Houston, Texas, for service in the section on general surgery in the Army general hospital in that city.

* * * *

Dr. Darrell A. Campbell, who was formerly associated with Dr. Bert Bradford, Jr., in the practice of his specialty of surgery at Charleston, and who is now located at Ann Arbor, Michigan, had an exhibit in the scientific section at the Auditorium with Dr. R. Glenn Smith, from Wayne County General Hospital, on "Arteriographic Examination of the Lower Extremeties."

Dr. Fred E. Brammer, formerly of Dehue, who moved to Florida early in the year, was registered as a guest doctor from Dania, in that state. Doctor Brammer still retains his membership in the Logan County Medical Society and the West Virginia State Medical Association.

* * * *

Dr. Alexander Witkow, former director of the bureau of county health work, state health department, was registered as a guest doctor from Worcester, Massachusetts, where he heads the city health department.

* * * *

Dr. Dan C. Elkin, of Atlanta, Georgia, who was on the staff at Ashford General Hospital until it was closed following World War II presented a paper before the section on surgery June 9. His subject was, "The Present Status of Anticoagulant Therapy in Surgery."

* * * *

Dr. R. H. Kunstader, of Chicago, was runner-up and winner of the Ben Thomas Trophy at the AMA golf tournament, turning in a 75. Doctor Kunstader was on the medical staff at Ashford General Hospital during World War II, and was guest speaker at meetings of several component societies in West Virginia during that period.

TESTIMONIAL DINNER FOR DOCTOR COLEMAN

Dr. Claude C. Coleman, chief neurosurgeon in the hospital division at the Medical College of Virginia, Richmond, was honored with a testimonial dinner at the Hotel John Marshall, in that city, May 30. Guests included fifteen surgeons from various parts of the country who obtained their start in training under him at the Medical College of Virginia.

Speakers included Dr. Howard Naffziger, of California, member of the board of regents, and past president of the College of Surgeons; Dr. John E. Pomfret, president of William and Mary; Dr. W. E. Sanger, president of the Medical College of Virginia; Dr. Winchell McK. Craig, director of the department of neurosurgery at the Mayo Clintic; and Honorable A. Willis Robertson, United States Senator from Virginia.

Doctor Coleman is well known to West Virginia doctors, having appeared on the program at annual meetings several times during past years.

Dr. Archer A. Wilson, Charleston neurosurgeon, was one of the hosts at the dinner, which was attended by over seventy physicians, surgeons, and friends of the honor guest.

Doctor Coleman founded the department of neurosurgery at the Medical College of Virginia in 1919. He is one of the pioneers in the field of nerosurgery, and during World War I served as chief of the school of brain surgery at Fort Oglethorpe. During World War II he served as civilian consultant in neurosurgery to the surgeon general of the Army.

NEW LICENSING BOARD MEETS JULY 7-9

The first meeting of the new Medical Licensing Board created under the provisions of an act passed by the legislature at the regular session in 1949 will be held at the Daniel Boone Hotel, in Charleston, July 7-9, 1949, for the purpose of examining applicants for license to practice medicine in West Virginia.

NEW BIENNIAL REGISTRATION LAW FOR DOCTORS EFFECTIVE JULY 1

The registration of all doctors in West Virginia will be undertaken by the state health department when the new biennial registration law becomes effective July 1. Dr. N. H. Dyer, state health commissioner, who will direct the registration, will mail to the last known address of every doctor licensed to practice in West Virginia, whether residing in or outside the state, a copy of the law, a blank registration form, and a letter of instructions.

Upon receipt of the completed application form from a doctor, with the registration fee of $2.00, the state health department will send the applicant a wallet-sized registration card showing that he has complied with the law by registering for the two-year period ending June 30, 1951.

The application is short and can be filled out by the doctor in a few minutes. If information concerning the license number has been misplaced or lost, this information will be supplied from the files of the department.

The whole program will be supervised by the new 11-member Medical Licensing Board, the members of which were appointed by Governor Patteson the latter part of June. Doctor Dyer will serve as secretary ex officio of the board.

The biennial registration is provided for under the provisions of H. B. 134, passed by the legislature at the regular session in 1949. The bill was sponsored by the West Virginia State Medical Association and was passed without opposition in the legislature.

Licenses of physicians who fail to comply with the provisions of the new act will be automatically cancelled by the new board, and continued practice after cancellation of a certificate and license will be construed as practicing without a license, and doctors so practicing will be subject to all the penalties provided by law for practicing without a license.

The board may reinstate a certificate of licensure upon receipt of an application for registration accompanied by current and delinquent fees, and a penalty of ten dollars.

Doctors who, for any reason, fail to receive the blank application for registration by July 6 are requested to bring the matter to the attention of the state health department so that duplicate forms may be mailed. All communications concerning registration should be addressed to Dr. N. H. Dyer, State Health Department, Charleston 5, W. Va.

EXAMINATIONS FOR LICENSURE JULY 7-9

The public health council has fixed July 7-9, 1949, as the dates for the mid-summer meeting to be held for the purpose of examining applicants for licensure to practice medicine in West Virginia.

The duties of the public health council with reference to matters concerned with licensure will be taken over by the new medical licensing board July first. It is expected that the new board, not yet appointed by the Governor, will be organized by that time, and will conduct the examinations called by the public health council.

MRS. W. E. HOFFMAN NAMED TO HIGH OFFICE IN NATIONAL AUXILIARY

Mrs. W. E. Hoffman, of Charleston, president of the Woman's Auxiliary to the West Virginia State Medical Association, was elected third vice president of the Woman's Auxiliary to the American Medical Association at that organization's 26th annual meeting in Atlantic City, held conjointly with the AMA meeting.

Mrs. David B. Allman, of Atlantic City, was installed as president, and Mrs. Arthur A. Herold, of Louisiana, as president elect. Mrs. H. F. Wahlquist, of Minnesota, was named first vice president, Mrs. Henry Garnjobst, of Oregon, second vice president, and Mrs. Mason G. Lawson, of Arkansas, fourth vice president. Mrs. Harry M. Gilkey, of Missouri, was elected constitutional secretary, and Mrs. George Turner, of Texas, treasurer.

Mrs. Luther H. Kice, who has appeared on programs in West Virginia several times, is the retiring president of the national auxiliary.

Mrs. W. E. Hoffman

Mrs. Hoffman is the fourth member of the West Virginia auxiliary to be honored by the Auxiliary to the AMA. Mrs. V. E. Holcombe is a past president of the national auxiliary, and the first West Virginia woman to hold an elective office in that organization. Mrs. John P. Helmick, of Fairmont, has served as fourth vice president, and Mrs. U. G. McClure, of Charleston, has just completed a term as member of the board of directors.

Efforts to detect the estimated one million unknown diabetic cases in the United States will be speeded by an automatic blood-sugar testing machine now being developed by the USPHS. Blood samples of 40 persons can be tested at one time.—R. N.

NEARLY 100 WEST VIRGINIA DOCTORS AT AMA MEETING IN ATLANTIC CITY

More than 13,000 doctors attended the 98th annual convention of the American Medical Association at Atlantic City, June 6-10. This total exceeded the attendance at any previous session except the centennial convention held in the same city in 1947, when over 15,000 doctors were registered. The overall registration for the 1949 session exceeded 31,000, including wives of doctors, residents, interns, nurses and exhibitors.

The attendance at the general sessions and scientific meetings of sections was probably the heaviest that has ever been experienced at an annual meeting. The scientific program was one of the best that has ever been arranged for an annual meeting. Meetings of sections were held at hotels and auditoriums within walking distance of most of the Boardwalk hotels.

West Virginia Doctors Participate

Dr. Russell C. Bond, of Wheeling, opened the discussion following the presentation of a paper in the Section on Pediatrics by Dr. Vernon L. Hart, of Minneapolis, whose subject was, "Congenital Dislocation of the Hip Joint: Early Recognition and Prevention."

In the Section on Urology, Dr. John F. McCuskey, of Clarksburg, discussed the paper, "Radioactive Urine and Urinary Tract Calculi," presented by Dr. David S. Cristol, of Philadelphia.

Colonel Sam F. Seeley (MC), USA, former executive officer at Ashford General Hospital, White Sulphur Springs, presented a paper in the Section on Surgery, together with Major Edwin J. Pulaski (MC) USA and Lt. James F. Connell (MC) USA. The title was "Sterilization of the Intestinal Tract by Antibiotics and Supplemental Agents."

Dr. Dan C. Elkin, of Atlanta, Georgia, who was on the staff of Ashford General Hospital until it was closed following World War II, presented a paper before the Section on Surgery, June 9. His subject was, "The Present Status of Anticoagulant Therapy in Surgery."

Auditorium Packed

The auditorium was jammed to capacity with scientific and technical exhibits. Every possible inch of space was used, including the stage. Over 360 technical exhibits were shown, and thousands of visitors walked the aisles at all times during the convention. It was probably the most interesting display that has ever been arranged for a meeting of the Association, and much credit is due Tom Gardiner, AMA business manager, for personally supervising the lay-out.

The view of the auditorium from the balcony, with plastics and special lighting features in evidence everywhere, was sufficient to attract representatives of newsreel companies, who made action pictures for showing in theatres over the country.

TV Draws Interest

Television played an increasingly important part in the convention proceedings. Several operations at Atlantic City and Philadelphia hospitals were beamed directly to the auditorium and seen by thousands of physicians.

The installation exercises for new officers drew a record attendance, and all entertainments arranged, including an "Old Gold" broadcast, and a style show, were attended by thousands of doctors and their wives.

Distinguished Service Medal

The Association's Distinguished Service Medal for 1949 was presented to Dr. Seale Harris, of Birmingham, professor emeritus of medicine at the University of Alabama. He is a past president of the Southern Medical Association, and former editor of the Southern Medical Journal.

West Virginia Registration

Nearly 100 West Virginia doctors attended the meeting, the greater number of whom had registered in advance. Most of the West Virginia visitors had rooms in Boardwalk hotels.

The following is the official registration of doctors from West Virginia to and including Thursday afternoon, June 9:

Henry Aldis, Shepherdstown; H. W. Angell, Charleston; Philip L. Azar, Wheeling; T. M. Barber, Charleston; J. Frank Barker, Huntington; H. George Bateman, Williamstown; W. P. Bittinger, Summerlee; James R. Bloss, Huntington; Russell C. Bond, Wheeling; Charles Hubert Bondurant, Martinsburg; W. E. Brewer, Logan; Henry M. Brown, Belle; I. E. Buff, Charleston;

John E. Cannaday, Charleston; B. S. Clements, Princeton; Richard V. Corton, Elkins; Howard R. Crews, Huntington; Edwin O. Daue, Beckley; Claude R. Davisson, Weston; Rank O. Dawson, Charleston; James J. DelVecchio, Wheeling; William S. Dick, Parkersburg; A. B. Curry Ellison, Charleston; Ivan Fawcett, Wheeling; Harley G. Feldick, Elkins; Worth B. Forman, Buckhannon; S. Oscar Fry, Charles Town;

Isabelle T. Gadzikowski, Hopemont; Michael A. Gaydosh, Jr., Wheeling; Francis J. Gaydosh, Wheeling; Thomas V. Gocke, Clarksburg; Sylvanus William Goff, Parkersburg; Charles L. Goodhand, Parkersburg; Emil Gribovsky, Huntington; Charles Gruenwald, Martinsburg;

Peter A. Haley, Charleston; G. P. Heffner, Charleston; Waldo C. Henson, Charleston; E. Bennette Henson, Charleston; Wilbur E. Hoffman, Charleston; W. P. Hodge, Matewan; Frank J. Holroyd, Princeton; D. L. Hosmer, Bluefield; Harold H. Howell, Madison; A. P. Hudgins, Charleston; A. L. Jones, Wheeling; E. Lloyd Jones, Wheeling;

Arnold F. Judge, Martinsburg; William K. Kalbfleisch, Wheeling; A. G. Kammer, Charleston; Clark Kessel, Beckley; J. G. Leech, Quinwood; Goff P. Lilly, Charleston; Henrietta L. Marquis, Charleston; M. A. Moore, Montgomery; Franklin B. Murphy, Philippi; Karl Johnson Myers, Philippi; U. G. McClure, Charleston; C. Glen McCoy, Wheeling;

John F. McCuskey, Clarksburg; S. Elizabeth McFetridge, Martinsburg; Donald K. McIntyre, Bolivar; W. Owen McMillan, Charleston; J. W. Newman, Affinity; R. C. Newman, Spencer; Earl S. Phillips, Wheeling; R. O. Pletcher, Lost Creek; Cecil O. Post, Clarksburg; Philip Preiser, Charleston; Albert M. Price, Madison; W. F. Richmond, Beckley;

R. O. Rogers, Bluefield; George Silverton, Huntington; Henry Thomas Sherman, Williamson; James F. Slaughter, Dunbar; Charles Earl Smith, Terra Alta; James T. Spencer, Charleston; E. H. Starcher, Logan; E. J. Stashak, Nellis; M. G. Stemmermann, Huntington; Wade H. St. Clair, Bluefield; Charles T. St. Clair, Jr., Bluefield; R. B. Talbott, Martinsburg;

Ingram C. Taylor, Martinsburg; W. A. Thornhill, Jr., Charleston; Raymond A. Tomassene, Wheeling; John M. Trach, Fairmont; S. W. Tretheway, Wheeling; Walter E. Vest, Huntington; Halvard Wanger, Shepherdstown; Howard G. Weiler, Wheeling; James E. Wilson, Clarksburg; James E. Wilson, Jr., Clarksburg; S. D. H. Wise, Parkersburg; and Chauncey B. Wright, Huntington.

AMA NAMES DR. E. L. HENDERSON PRESIDENT TO SUCCEED DR. IRONS

Dr. Walter E. Vest, of Huntington, and Dr. Ivan Fawcett, of Wheeling, represented the West Virginia State Medical Association in the House of Delegates at the annual meeting held in Atlantic City early in June.

Very few controversial matters arose for discussion, and there seemed to be a spirit of harmony in all official deliberations of the House. Reports of reference committees provided some little debate, but there was no contest for any of the major offices at the election held on June 9.

Council's Resolution Referred

The resolution adopted by the Council of the West Virginia State Medical Association at a meeting held at Parkersburg, May 19, embodying the principles proposed by Dr. Thomas G. Reed, the president, in his "President's Page," in the April issue of the West Virginia Medical Journal, was offered in the AMA House of Delegates by Dr. Walter E. Vest, one of the delegates from West Virginia.

The resolution was referred without prejudice to the coordinating committee of the Council on Medical Service. The effect of this action on the part of the House of Delegates is to provide time for the Council on Medical Service to study its provisions before the interim meeting at Washington, D. C., December 6-9, 1949.

Dr. E. L. Henderson President Elect

Dr. Elmer L. Henderson, of Louisville, was named president elect of the American Medical Association. He will succeed Dr. Ernest E. Irons, of Chicago, who will serve until the annual meeting at San Francisco in 1950. Dr. James F. Norton, Jr., president of the Medical Society of New Jersey, was elected vice president to succeed Dr. Roy W. Foutz, of Omaha. Dr. Frank F. Borzel, of Philadelphia, was reelected speaker of the House of Delegates.

Dr. F. J. L. Blasingame, of Wharton, Texas, succeeds Doctor Henderson as a member of the board of trustees. Dr. Louis H. Bauer, of Hempstead, New York, was reelected a member of the board for the term expiring in 1954.

Well Known in West Virginia

Doctor Henderson, the president elect, is well known to the medical profession in West Virginia. A prominent surgeon of Louisville, he served as chairman of the Fifth Corps Area Committee, Procurement and Assignment Service for physicians, dentists and veterinarians during World War II. He has served as president of the Kentucky State Medical Association, the Southeastern Surgical Congress, and the Southern Medical Association. He has been a member of the AMA House of Delegates since 1937, and a member of the board of trustees since 1939. He has served as chairman of the board since 1947.

1950 Meeting in San Francisco

After meeting in San Francisco in 1950, the AMA will return to Atlantic City for the annual meeting in 1951. Chicago was named the convention city for 1952.

NEW MEMBERS OF STATE MEDICAL ASSOCIATION ELECTED SINCE JAN. 1

The following is a list, by component societies, of new members of the West Virginia State Medical Association, elected since the publication of the 1949 roster:

Boone

Scott, J. M. ..... Madison
Speed, George W. ..... Madison

Cobell

Cole, Bart ..... Huntington
Frame, Luke W. ..... Huntington
Katz, Milton ..... Huntington
Kehoe, M. B. ..... Huntington
Sherman, John J. ..... Huntington
Walker, S. P. ..... Huntington

Greenbrier

Ballau, Charles ..... White Sulphur Springs

Hancock

Greco, Ray ..... Weirton

Konowho

Allen, Joel ..... Charleston
Bannen, W. J., Jr. ..... Dunbar
Henson, Waldo C. ..... Charleston
MacDonald, K. G. ..... Charleston
Morrison, John T. ..... Charleston
Nestmann, Ralph H. ..... Charleston
Spencer, James T. ..... Charleston
Thompson, A. C. ..... Charleston
Tully, C. Carl ..... So. Charleston
Wise, Fred C. ..... Cabin Creek

Logon

Chillag, Erwin R. ..... Holden
Hagen, Charles H., Jr. ..... Holden
Hrutkay, W. J. ..... Lundale
Ramsey, Oscar L., Jr. ..... Holden

Mercer

Brown, A. Wilson ..... Bramwell

Mingo

Carter, J. Marshall ..... Huntington

Monongolia

Curry, George A. ..... Morgantown
Logue, Clarence A. ..... Morgantown
Nottingham, Robert J. ..... Morgantown

McDowell

Boone, Henry ..... Elbert
Cover, William A. ..... Harman (Va.)
Dean, Robert J. ..... Kimball
Weiksnar, John F. ..... Caretta

Ohio

Chamberlain, Robert L. ..... Wheeling
Dickie, Herbert G., Jr. ..... Wheeling
Fawcett, R. Alan ..... Wheeling
Veremakis, Constantine ..... Wheeling

Parkersburg

Kanner, Oscar ..... Parkersburg
Keever, C. M. ..... Belpre (Ohio)
Post, Guy R. ..... Parkersburg
Young, H. B. ..... St. Marys

Roleigh

Hendricks, Esten J. ..... Lillybrook
Patterson, Wm. C. ..... Beckley
Ward, Charles ..... Beckley

Wetzel

Skinner, J. M., Jr. ..... New Martinsville

PLASTIC EYES

Plastic eyes so lifelike that they appear to contract in the sunlight and dilate in more subdued light, are being made by two brothers, Paul and Donald Holmen, in Burbank, Calif. These artificial eyes, produced by a secret technique, also surpass glass eyes by being unbreakable and more comfortable.—R. N.

CONVENTION PROGRAM

82nd Annual Meeting

of the

West Virginia State Medical Association

THE GREENBRIER, WHITE SULPHUR SPRINGS

August 4-6, 1949

WEDNESDAY AFTERNOON
August 3

2:00—Registration at Auditorium, The Greenbrier.

WEDNESDAY EVENING

6:00—Pre-convention meeting of the Council. Thomas Bess, M. D., *presiding.*

THURSDAY MORNING
August 4

10:00—"The Newer Developments in Anesthesia."—L. H. Mousel, M. D., Washington, D. C.

Major developments in the field of anesthesiology during the past ten years have made possible the more important advances in surgery. The use of new drugs and methods for surgical and obstetrical anesthesia have resulted in more ideal operating conditions and greater safety to the patient. The newer agents and methods, including combinations, will be discussed.

10:45—"Antibiotics."—Maxwell Finland, M. D., Boston.

The present status of the use of antibiotics, with particular reference to the new ones, will be reviewed.

11:30—"Recent Developments in Cardiac Drugs."—Harry Gold, M. D., New York City.

Comparison of several glycosides of the digitalis series, a new semi-synthetic ester which by intravenous injection exerts its full effect almost with the speed of epinephrine, and the most effective application of the mercurial diuretics in the treatment of congestive failure.

12:15—Panel discussion led by the three speakers on the morning program.

THURSDAY AFTERNOON

2:30—Meetings of sections and affiliated societies.
4:00—First meeting of House of Delegates.

THURSDAY EVENING

8:45—Presidential address.—Thomas G. Reed, M. D., Charleston.

9:15—Introduction of Mrs. W. E. Hoffman, Charleston, president of the Woman's Auxiliary to the West Virginia State Medical Association.

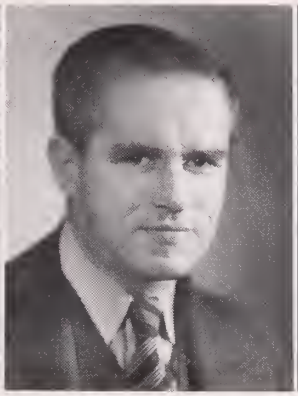
FRIDAY MORNING
August 5

10:00—"Present Status of Anticoagulant Therapy in the Treatment of Thrombo-embolic Diseases."—Irving S. Wright, M. D., New York City.

It has now been conclusively demonstrated that the

CONVENTION SPEAKERS

L. H. Mousel, M. D.



Maxwell Finland, M. D.

Harry Gold, M. D.

Irving S. Wright, M. D.

principle of anticoagulant therapy represents a marked advance in the treatment of thrombophlebitis, phlebothrombosis, coronary thrombosis, and auricular fibrillation with embolic phenomena. Other fields involving thromboembolic phenomena are under study. New anticoagulants are being developed and evaluated but must be regarded with caution at present. Only those who are suitably trained and who have satisfactory laboratory facilities should use anticoagulant therapy.

10:45—"Congestive Heart Failure."—William D. Stroud, M. D., Philadelphia.

A discussion of the diagnosis; the use of digitalis and coronary dilators; the use of a low sodium diet plus sufficient fluids and mercurials.

11:30—"Current Considerations of Peripheral Vascular Disease."—Michael E. DeBakey, M. D., Houston, Texas.

This presentation is concerned with the most common forms of peripheral vascular disease with emphasis upon current concepts of therapy. An analysis of our experience covering a follow-up period of over four years will be given showing results of the most effective forms of treatment.

12:15—Panel discussion led by the three speakers on the morning program.

FRIDAY AFTERNOON

2:30—Meetings of sections and affiliated societies.
4:00—Second meeting of House of Delegates.

FRIDAY EVENING

8:45—"Medical Care in the Atomic Age."—Harold C. Lueth, M. D., Omaha.

The atomic bomb has created more problems in medical care. The physical effects of the bomb have been well described, and follow the traditional pattern of high explosives and are on a tremendously exaggerated scale. The intense heat causes severe destruction and many burns. After products of the atomic bomb and gamma radiation are responsible for most of the casualties. The delayed effects of radiation sickness possess additional hazards following the atomic bomb. A brief description of the type of organizations made to provide adequate medical care is outlined.

SATURDAY MORNING
August 6

9:30—"Surgery of the Pancreas."—Richard B. Cattell, M. D., Boston.

Until recently, surgical treatment of lesions of the pancreas has been confined to the treatment of acute pancreatitis and palliative cholecystjejunostomy for the relief of jaundice due to carcinoma. Infrequently, pancreatic lesions in the form of cysts or tumors have been found during abdominal explorations.

There are a large number of lesions of surgical interest affecting the pancreas. These can be divided into congenital, inflammatory and traumatic lesions as well as tumors.

The incidence and surgical treatment of a number of these lesions will be discussed, together with the results of treatment.

10:15—"Tumors in Childhood."—Sidney Farber, M. D., Boston.

11:00—"The Significance of Hematuria."—R. M. LeComte, M. D., Washington, D. C.

The diagnostic importance of hematuria. Its causes, general and local. Various types depending on the time of occurance and on associated symptoms. The diagnosis. Treatment, palliative and curative.

11:45—"Carcinoma of the Cervix Uteri."—Bayard Carter, M. D., Durham, N. C.

A brief review of the changing concepts of cancer and its treatment will be given. A discussion of radio-therapy and its complications and of the radical surgical approach and its complications will be illustrated.

SATURDAY AFTERNOON

2:30—Meetings of sections and affiliated societies.

SATURDAY EVENING

7:30—Annual Banquet.—Dr. Will Durant, guest speaker. Subject, "What Are the Lessons of History?"

CONVENTION SPEAKERS

William D. Stroud, M. D.

Michael E. DeBakey, M. D.

Richard B. Cattell, M. D.

Harold C. Lueth, M. D.

MEETINGS OF SECTIONS, SOCIETIES AND COMMITTEES DURING CONVENTION

The program for afternoon meetings of sections and affiliated societies and associations will not be completed before July 1; however, speakers have already been engaged for addresses before several of these organizations.

With one exception, so far as is now known, the speakers at afternoon sessions will also appear on the program at general sessions. The exception is Dr. Byron Smith, of New York City, who is coming to White Sulphur as the guest speaker before the Section on Ophthalmology and Otolaryngology.

Dr. Smith is professor of ophthalmology and otolaryngology at New York University, and is chief of the Section on Ophthalmic Plastic Surgery at the Manhattan Eye, Ear and Throat Hospital. He will present a paper on "Plastic Surgery in Ophthalmology."

The complete plans for all afternoon meetings will appear in the official program, which will be distributed at the convention.

The Council

The pre-convention meeting of the Council will be held at The Greenbrier, in White Sulphur Springs, Wednesday evening, August 3, the day preceding the opening of the 82nd annual meeting of the West Virginia State Medical Association.

Committee on Medical Education

A meeting of the Committee on Medical Education has been called by the chairman, Dr. Hu Myers, of Philippi, for Thursday afternoon, August 4, at 2:00 o'clock, at The Greenbrier, in White Sulphur Springs. Besides Doctor Myers, the committee is composed of Drs. Bert Bradford, Jr., Charleston; Elizabeth McFetridge, Shepherdstown; E. J. Van Liere, Morgantown; Jack T. Gocke, Clarksburg; and Clark Kessel, Beckley.

Heart Association

A meeting of the executive committee of the West Virginia Heart Association will be held at The Greenbrier hotel, White Sulphur Springs, on Saturday morning, August 6, at 8:15 o'clock. The meeting was called for this date by the president, Dr. W. A. Thornhill, Jr., as it is thought that all of the members of the association who expect to attend the annual meeting of the State Medical Associaion will be in White Sulphur Springs by that time.

Emergency Medical Service

A meeting of the special committee on Emergency Medical Service has been called by the chairman, Dr. Russel Kessel, of Charleston, for Wednesday afternoon, August 3, at four o'clock, at The Greenbrier, in White Sulphur Springs. The other members of the committee are Drs. L. Rush Lambert, of Fairmont, and Ward Wylie, of Mullens.

WILL DISCUSS NURSING PROBLEMS

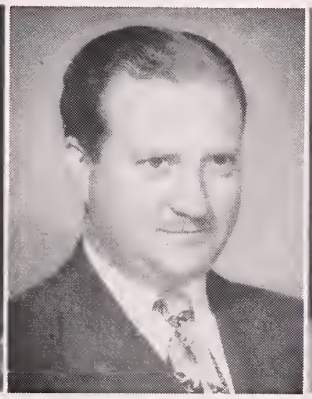
Drs. W. Fred Richmond, of Beckley, L. Rush Lambert, of Fairmont, and M. H. Porterfield, of Martinsburg, have been appointed by Dr. Thomas Bess, chairman of the Council of the West Virginia Medical Association, as members of a special committee to meet with the Board of Examiners for Nurses, to discuss matters of mutual interest. Doctor Richmond will serve as chairman.

The appointment of the committee was authorized at the meeting of the Council held at Parkersburg, May 19.

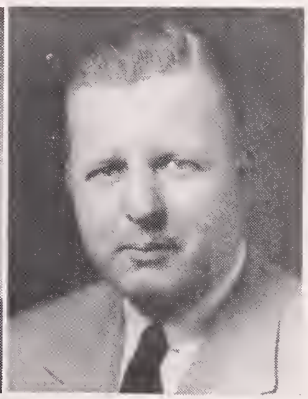
Doctor Richmond has announced that his committee will welcome constructive criticism and suggestions that will be of help to the members in preparing an agenda for the first meeting which will be held with the Board of Examiners for Nurses.

CONVENTION SPEAKERS

Ralph M. LeComte, M. D.



Byron Smith, M. D.



Bayard Carter, M. D.

CONVENTION SPEAKERS

(Biagraphical Sketches)

RICHARD B. CATTELL, M. D., Boston; M. D., Harvard, 1925; fellow in surgery, Lahey Clinic, 1927-29; now surgeon, Lahey Clinic and New England Baptist Hospital; chief surgeon, New England Deaconess Hospital.

FRANCIS BAYARD CARTER, M. D., Durham, N. C.; M. D., Johns Hopkins, 1925; M. A. (physiology), Oxford, 1932; head, Department of Obstetrics and Gynecology, University of Virginia Department of Medicine, 1929-31; head, Department of Ob. and Gyn. and Endocrinology, Duke University School of Medicine, since 1931.

MICHAEL DeBAKEY, M. D., Houston, Texas; B. S., Tulane University, New Orleans, 1930, M. D., 1932, and M. S., 1935; assistant professor of surgery, (full-time) Tulane University, 1940-46, and associate professor (full-time) 1946-48; Judson L. Taylor professor of surgery, and chairman of Department of Surgery, Baylor University College of Medicine, since October 1, 1948; visiting surgeon at Jefferson Davis Hospital and Methodist Hospital, Houston; Colonel, AUS (Res.) during World War II; assigned to Surgeon General's Hospital as chief, General Surgery Branch, Surgical Consultant's Division, and as assistant director, acting director, and director, respectively, of the Surgical Consultant's Division.

SIDNEY FARBER, M. D., Boston; M. D., Harvard, 1927; Pathologist in Chief at Children's Hospital and Infant's Hospital, Boston; chairman, Division of Laboratories and Research; professor of Pathology at Harvard Medical School.

MAXWELL FINLAND, M. D., Boston; M. D., Harvard, 1926; associate professor of Medicine, Harvard Medical School; chief, Fourth Medical Service, Boston City Hospital; associate professor, Thorndike Memorial Laboratory, Boston City Hospital.

HARRY GOLD, M. D., New York City; professor of Clinical Pharmacology, Cornell University Medical College; Physician-in-Chief of the Cardiovascular Research Unit of the Beth Israel Hospital; Attending Cardiologist of the Hospital for Joint Diseases; Associate Editor of the American Journal of Medicine; and Managing Editor of the Cornell Conferences on Therapy.

RALPH M. LeCOMTE, M. D., Washington, D. C.; M. D., Georgetown, 1910; interned Providence Hospital and Columbia Hospital; microscopist, Army Medical Museum, 1912-13; assistant professor of Urology, Georgetown University School of Medicine, 1920-26, and professor of Urology, 1926-45; clinical professor since that time.

HAROLD C. LUETH, M. D., Omaha, Nebraska; M. D., Northwestern University, Ph. D. in physiology, Northwestern; Surgeon General's liaison to the American Medical Association, 1942-45, and now Colonel (MC) (Res.); Research assistant, assistant, and instructor in physiology, Northwestern University Medical School, 1926-1930; clinical assistant and instructor in medicine, 1931-36; associate and assistant professor in medicine, University of Illinois College of Medicine, 1936-46; now Dean of College of Medicine, University of Nebraska, and professor of Internal Medicine, and superintendent of University Hospital of Nebraska since 1946.

LLOYD HARVEY MOUSEL, M. D., Washington, D. C.; M. D., Nebraska, 1930; M. S., Minn. (Anes.) 1939; fellow, Anes., Mayo Foundation, Minn. University, 1936-39; consultant, Mayo Clinic, 1939-42; instructor, Mayo Foundation Grad. School, Minn. University, 1939-43; assistant professor Anesthesiology, Grad. School University of Minn., 1943-46; Lt. Col. (MC), AUS, director, Anes., Army Medical Center, Washington, D. C., 1944-46; consultant in Anesthesiology to the Surgeon General, U. S. Army and to the Secretary of War; professor of Anesthesiology and executive head, Department of Anesthesiology, The George Washington University Hospital.

BYRON SMITH, M. D., New York City; M. D., University of Kansas School of Medicine, surgical internship and part of training in Ophthalmology at New Haven Hospital, Yale University; ophthalmological residency at New York Eye and Ear Infirmary; ophthalmologist with Bellevue Unit during World War II, serving as senior ophthalmological consultant, ETO, 1944-45; now assistant professor of ophthalmology at New York University College of Medicine, chief of the Section on ophthalmologic plastic surgery at Manhattan Eye, Ear, and Throat Hospital, and on visiting staff at New York Eye and Ear Infirmary.

WILLIAM D. STROUD, M. D., Philadelphia; licentiate of the National Board of Medical Examiners; certified by American Board of Internal Medicine as cardiologist in 1940; past president of the American Heart Association; fellow and treasurer of the American College of Physicians; professor of cardiology of the University of Pennsylvania Graduate School of Medicine, and consulting cardiologist to the Graduate Hospital; assistant professor of clinical medicine of the University of Pennsylvania School of Medicine; consulting cardiologist to the Pennsylvania Hospital, Bryn Mawr Hospital, Children's Heart Hospital of Philadelphia, and St. Christopher's Hospital; chairman of the Rheumatic Fever Committee of the Pennsylvania Department of Health and of the Medical Society of Pennsylvania.

IRVING S. WRIGHT, M. D., New York City; chief of the vascular section of the Department of Medicine of the Cornell Medical School and New York Hospital; associate professor of Clinical Medicine, Cornell University Medical College; consultant in medicine to the Surgeon General of the Army; member, editorial board of the American Heart Journal and executive committee of the American Heart Association; member, American Society for Clinical Investigation, and Society for Experimental Biology and Medicine.

DELEGATES AND ALTERNATES*

B-R-T (3)—Delegates, Donald R. Roberts, Elkins, Hu C. Myers, Philippi, and Guy H. Michael, Parsons. Alternates, Julius L. Berkley, Elkins, C. E. Johnson, Parson, and A. Kyle Bush, Philippi.

BOONE (2)—Delegates, J. M. Scott and H. A. Smith, Madison. Alternates, H. H. Howell, Madison, and O. D. Ballard, Van.

BROOKE (1)—Delegate, J. P. McMullen, Wellsburg. Alternate, H. L. Hegner, Wellsburg.

CABELL (7)—Delegates, Thomas B. Baer, C. A. Hoffman, E. J. Humphrey, I. I. Hirchman, C. H. Boso, J. J. Brandabur, and J. L. Hutchison, Huntington. Alternates, Francis L. Coffey, R. M. Wylie, Norris F. Hines, C. B. Wright, John D. German, C. S. Clay, and C. D. Genge, Huntington.

CENTRAL WEST VIRGINIA (3)—Delegates, Theresa O. Snaith, Weston, W. E. Echols, Richwood, and B. L. Page, Buckhannon. Alternates, W. W. Huffman, Gassaway, Ralph M. Fisher, Weston, and M. T. Morrison, Sutton.

DODDRIDGE (1)—Delegate, A. Poole, West Union.

EASTERN PANHANDLE (2)—Delegates, G. O. Martin, and C. G. Powers, Martinsburg. Alternates, Elizabeth McFetridge, Shepherdstown, and William L. Haltom, Martinsburg.

FAYETTE (3)—Delegates, W. E. Bundy, Jr., and C. E. Watkins, Oak Hill, and R. A. Updike, Montgomery. Alternates, T. Kerr Laird, and W. L. Claiborne, Montgomery, and J. N. Jarrett, Oak Hill.

GREENBRIER VALLEY (2)—Delegates, R. M. Ferrell, Lewisburg, and H. B. Strader, White Sulphur Springs. Alternates, Claude L. Houck, Lewisburg, and Charles Ballau, White Sulphur Springs.

HANCOCK (2)—Delegates, R. E. Flood, Hollidays Cove, and J. M. Brand, Chester. Alternates, A. A. Yurko, Hollidays Cove, and M. Bogarad, Weirton.

HARRISON (4)—Delegates, John F. McCuskey, J. E. Wilson, S. S. Hall, and C. O. Post, Clarksburg. Alternates, H. V. Thomas, Lawrence H. Mills, T. V. Gocke, and James G. Ralston, Clarksburg.

KANAWHA (11)—Delegates, John W. Hash, Paul H. Revercomb, H. M. Escue, Wm. C. Stewart, A. A. Wilson, Bert Bradford, Jr., H. M. Beddow, William B. Rossman, P. A. Tuckwiller, and H. A. Swart, Charleston, and H. H. Howell, Madison. Alternates, G. F. Grisinger, Joel Allen, Rank O. Dawson, John E. Lutz, T. P. Mantz, R. R. Summers, R. C. Bock, F. G. Reel, and Richard N. O'Dell, Charleston, E. A. Gearhart, St. Albans, and S. B. Souleyret, Cabin Creek.

LOGAN (3)—Delegates, Frank R. Jamison, I. M. Kruger, and J. L. Patterson, Logan. Alternates, A. M. French, Logan, Charles H. Hagen, Jr., and Erwin R. Chillag, Holden.

MARION (3)—Delegates, George T. Evans, E. W. Hickson, and L. D. Norris, Fairmont. Alternates, F. F. Sowers and J. R. Tuckwiller, Fairmont.

MARSHALL (2)—Delegates, David L. Ealy and J. C. Peck, Moundsville. Alternates, Willian P. Bradford and Harold B. Ashworth, Moundsville.

MASON (1)—Delegate, C. Leonard Brown, Pt. Pleasant. Alternate, Dan Glassman, Pt. Pleasant.

MERCER (3)—Delegates, Frank J. Holroyd, Princeton, Hampton St. Clair, and E. L. Gage, Bluefield. Alternates, L. J. Pace, Princeton.

MINGO (2)—Delegates, J. C. Lawson, and H. C. Hays, Williamson. Alternates, J. C. Gaskel, and George W. Easley, Williamson.

MONONGALIA (3)—Delegates, Clark K. Sleeth, E. F. Heiskell, and E. B. Tucker, Morgantown. Alternates, C. C. Romine, and L. M. Strawn, Morgantown.

McDOWELL (3)—Delegates, Otis E. Linkous, Welch, C. W. Vick, Jenkinjones, and J. H. Murry, Vivian. Alternates, Florien Vaughn, Hemphill, and A. J. Villani, and R. H. Edwards, Welch.

OHIO (5)—Delegates, W. Carroll Boggs, Russell B. Bailey, D. E. Greeneltch, and George L. Viewig, Wheeling. Alternates, C. D. Hershey, A. J. Niehaus, R. U. Drinkard, and R. D. Gill, Wheeling.

PARKERSBURG ACADEMY (5)—Delegates, Logan W. Hovis, James L. Wade, S. William Goff, and Dana T. Moore, Parkersburg, and George Bateman, Williamstown. Alternates, Richard W. Corbitt, Athey R. Lutz, C. L. Goodhand, R. H. Wharton, and James C. Batten, Parkersburg.

POTOMAC VALLEY (2)—Delegates, J. B. Grove, and V. L. Dyer, Petersburg. Alternates, R. W. Love, Moorefield, and J. H. Wolverton, Piedmont.

PRESTON (2)—Delegates, C. Y. Moser, Kingwood, H. C. Miller, Eglon, and W. P. Johnson, Arthurdale. Alternates, D. R. Davis, and T. S. McIntire, Kingwood.

RALEIGH (4)—Delegates, Wallace B. Lilly, Paul E. Vaughan, T. U. Vermillion, and W. C. Covey, Beckley. Alternates, G. C. Hedrick, Jr., Beckley, and John W. Whitlock, Affinity.

SUMMERS (1)—Delegate, D. W. Ritter, Hinton. Alternate, C. L. Howard, Hinton.

TAYLOR (2)—Delegates, Paul P. Warden, and Charles A. Haislip, Grafton.

WETZEL (2)—Delegates, A. M. Dyer, Jr., Pine Grove, J. O. Theiss, New Martinsville. Alternates, Terrell Coffield, and E. C. Blum, New Martinsville.

WYOMING (2)—Delegates, J. F. Biggard, Mullens.

*The list of Delegates and Alternates is incomplete as this issue of The Journal goes to press.

WOMAN'S AUXILIARY

to the

West Virginia State Medical Association

Official Program

25th Annual Meeting

The Greenbrier
White Sulphur Springs
Aug. 4-6, 1949

THURSDAY AFTERNOON

Aug. 4

12:00—Registration, Virginia Room.

4:00—Pre-convention meeting of the Board, Virginia Room. Mrs. W. E. Hoffman, President, *presiding.*

10:00—Bridge, dancing, movies.

FRIDAY MORNING

Aug. 5

8:00—Past President's Breakfast, private dining room. Mrs. F. Carl Chandler, *presiding.*

9:30—Formal opening of the Convention, Virginia Room. Mrs. W. E. Hoffman President, *presiding.*

Invocation—The Rev. Lloyd C. Courtney, D.D., Pastor of Old Stone Church, Lewisburg.

Pledge of Loyalty—Mrs. Charles L. Leonard, Elkins, President, Barbour-Randolph-Tucker Auxiliary.

Greetings—Dr. James P. Baker, Medical Director of the Greenbrier Hotel and Clinic.

Response—Mrs. C. G. Power, Martinsburg, President of the Eastern Panhandle Auxiliary.

Presentation of Convention Chairman—Mrs. J. Preston Lilly.

Introductions—Mrs. W. E. Hoffman.

Presentation of the President Elect, Mrs. Dana T. Moore.

Roll Call—Mrs. C. J. Holley.

Minutes of the Pre-convention Board Meeting—Mrs. C. J. Holley.

Convention Rules of Order—Mrs. U. G. McClure.

Credentials and Registration—Mrs. Hunter Boggs.

Report of 1949 National Convention at Atlantic City—Mrs. Ross P. Daniel.

Reports of Officers:

President—Mrs. W. E. Hoffman.
President Elect—Mrs. Dana T. Moore.
First Vice President—Mrs. J. Preston Lilly.
Second Vice President—Mrs. Ross P. Daniel.
Third Vice President—Mrs. R. H. Curry.
Fourth Vice President—Mrs. R. U. Drinkard, Jr.
Corresponding Secretary—Mrs. A. C. Chandler.
Recording Secretary—Mrs. C. J. Holley.
Treasurer—Mrs. J. F. McCuskey.

Reports of Standing Committees:

Archives—Mrs. Herbert Beddow.
Exhibits—Mrs. Eugene S. Carter, Jr.
Finance—Mrs. Gilbert Ratcliff.
Historian—Mrs. Edward W. Hickson.
Hygeia—Mrs. Junior W. Myers.
Legislation—Mrs. Ralph J. Jones.
Necrology—Mrs. F. Carl Chandler.
Organization—Mrs. Dana T. Moore.
Parliamentarian—Mrs. U. G. McClure.
Program—Mrs. L. D. Norris.
Press and Publicity—Mrs. John W. Hash.
Editor of News Bulletin—Mrs. W. A. Thornhill, Jr.
Public Relations—Mrs. Charles Goodhand.
Revisions—Mrs. S. S. Hall.

Reports of Special Committees:

Bulletin—Mrs. John C. Condry.
Speaker's Bureau—Mrs. George F. Evans.
Nurse Recruitment—Mrs. D. E. Greeneltch.
Credits and Awards—Mrs. T. U. Vermillion.
Southern Medical—Mrs. Ralph S. McLaughlin.
Special Projects—Mrs. Ralph Hogshead.

FRIDAY AFTERNOON

1:00—Luncheon in honor of Past Presidents of the Woman's Auxiliary to the West Virginia State Medical Association, and the Presidents of the Ohio and Pennsylvania Auxiliaries. Mrs. T. Maxfield Barber, *presiding.*

Call to Order—Mrs. W. E. Hoffman, President.

Invocation—Mrs. B. S. Preston.

Guests—Drs. John P. Helmick, William A Thornhill, Jr., Frank J. Holroyd, Elizabeth McFetridge, and Edwin J. Humphrey, Jr., members of the State Advisory Board; and Dr. Thomas G. Reed, President of the West Virginia State Medical Association and Dr. Thomas Bess, Chairman of the Council.

3:00—Golf, tennis, swimming. horseback riding and bridge.

FRIDAY EVENING

10:00—Bingo, bridge and dancing.

SATURDAY MORNING

Aug. 6

9:30—General Session, Virginia Room, Mrs. W. E. Hoffman, *presiding.*

Minutes—Mrs. C. J. Holley.
Announcements—Mrs. J. Preston Lilly.
Credentials and Registration—Mrs. Hunter Boggs.
In Memoriam—Mrs. F. Carl Chandler.
Resolutions—Mrs. Ralph J. Jones.

Reports of County Presidents:
- Barbour-Randolph-Tucker—Mrs. Charles L. Leonard.
- Cabell—Mrs. R. H. Curry.
- Eastern Panhandle—Mrs. C. J. Power.
- Fayette—Mrs. J. N. Jarrett.
- Harrison—Mrs. Lynwood D. Zinn.
- Kanawha—Mrs. John W. Hash.
- Logan—Mrs. J. W. Lyons.
- Marion—Mrs. F. F. Sowers.
- McDowell—Mrs. A. J. Villani.
- Mercer—Mrs. W. C. Slusher.
- Ohio—Mrs. W. E. Ackerman, Jr.
- Potomac Valley—Mrs. Harry F. Coffman.
- Raleigh—Mrs. John E. McKenzie.
- Wood—Mrs. A. Morgan Dearman.

Unfinished Business.

New Business.

Report of Nominating Committee—Mrs. E. H. Starcher.

Election of Officers.

Installation of Officers and Presentation of President's Pin—Mrs. David B. Allman, President of the Woman's Auxiliary to the American Medical Association.

Inaugural Address—Mrs. Dana T. Moore, Parkersburg.

Courtesy Resolutions.

Adjournment.

SATURDAY AFTERNOON

1:00—Luncheon in honor of Mrs. David B. Allman, President of the Woman's Auxiliary to the American Medical Association and Mrs. Dana T. Moore, President of the Woman's Auxiliary to the West Virginia State Medical Association. Mrs. John W. Hash, *presiding*.

Call to Order—Mrs. W. E. Hoffman.

Invocation—Mrs. U. G. McClure.

Guest Speaker—Mrs. David B. Allman.

Guests—Presidents of the Ohio and Pennsylvania Auxiliaries.

3:00—Post-convention Board Meeting, Virginia Room, Mrs. Dana T. Moore, *presiding*.

School of Instruction for Officers and Chairmen.

SATURDAY EVENING

7:30—Annual Banquet.

10:00—Dancing.

CHEST PHYSICIANS ELECT OFFICERS

The following is the list of new officers elected at the recent meeting of the American College of Chest Physicians in Atlantic City:

President, Joseph C. Placak, Cleveland, Ohio; president elect, Louis Mark, Columbus, Ohio; first vice president, Harry C. Warren, San Francisco; second vice president, Chevalier L. Jackson, Philadelphia; treasurer, Minas Joannides, Chicago; and executive secretary, Murray Komfeld, Chicago.

"GRASS ROOTS" CONFERENCE

The Fifth National Conference ("Grass Roots") of county medical society officers, held at Atlantic City, Sunday, June 5, drew an attendance of more than 250 representatives of local societies from the United States.

The first conference was held in Atlantic City in 1944, and meetings have been held since that time in connection with the annual and interim sessions of the American Medical Association.

Dr. Frank J. Holroyd, of Princeton, served as one of the three moderators at the conference, and subjects discussed included handling of emergency medical calls, the care of the indigent, and the AMA National Education Campaign. The campaign was discussed by Clem Whittaker and Leone Baxter, directors of the campaign. Hon. John L. McClellan, United States Senator from Arkansas, was the guest speaker at the evening session, when he spoke in opposition to compulsory health insurance.

Dr. A. M. Mitchell, of Terre Haute, Indiana, is chairman of the conference.

LOW PROTEIN INTAKE DURING PREGNANCY

Six separate investigations on the protein intake of pregnant women are in striking agreement concerning the low percentage of patients obtaining an amount which is regarded as an adequate daily protein intake. As a criterion, these investigators used protein intakes of 80 or 85 Gm. daily. The percentage of patients obtaining at least these amounts was low, ranging from 7 to 37 per cent.

The use of Mead's concentrated protein foods, Protenum and Casec, greatly simplifies the problem of encouraging an optimum intake of protein during pregnancy. Both of these preparations, consisting of protein of high biologic value, are palatable and can be incorporated in a number of attractive recipes.

For literature on Protenum and Casec, write Mead Johnson & Company, Evansville 21, Indiana.

AAGP TO MEET IN ST. LOUIS

The 2nd scientific assembly of the American Academy of General Practice will be held in St. Louis, February 20-23, 1950, with headquarters in the Kiel Auditorium.

All scientific sessions will be held in the opera house, and scientific and technical exhibits set up in the auditorium. Room reservations will be handled by a local housing bureau, and blank forms for reserving rooms will be mailed later in the year to all members of the Academy.

Over 3500 doctors attended the meeting at Cincinnati last February, and it is expected that this registration total will be exceeded at the meeting in St. Louis.

AM. GERIATRICS SOCIETY NAMES OFFICERS

At the annual meeting of the American Geriatrics Society, held at Atlantic City early in June, the following officers were elected for the ensuing year:

President, Hallis E. Clow, White Plains, New York; first vice president, Harold W. Lovell, New York City; second vice president, Willard O. Thompson, Chicago; secretary, Walford W. Thewlis, Wakefield, Rhode Island; and treasurer, Richard J. Kraemer, Providence, Rhode Island.

GOVERNOR SETS UP NEW MEDICAL LICENSING BOARD TO REPLACE PHC

Two members of the present public health council have been appointed by Governor Okey L. Patteson as members of the new Medical Licensing Board, which will, on July 1, succeed to all the licensing duties of the council.

Dr. Walter E. Vest, of Huntington, dean of the public health council, was appointed for a four-year term, and Dr. William P. Bittinger, of Summerlee, for a five-year term. Both have been members of the PHC for several years, and Doctor Vest has served as its president since 1937.

The other doctors appointed by the Governor as members of the new board are Cecil B. Pride, of Morgantown, one-year term; George F. Evans, of Clarksburg, two years; Frank J. Holroyd, of Princeton, three years; and Doff D. Daniel, of Beckley, five years.

The chiropodist and chiropractic members, who will sit as members when examinations are given in these particular fields, are as follows:

Chiropodists: D. A. Afflack, of Parkersburg, two-year term, and E. R. Johnson, of Charleston, three-year term; chiropractors: F. M. Remick, of Wheeling, one-year term, and R. E. Tripp, of Fairmont, four-year term.

The new board was appointed under the provisions of H. B. 134, passed by the legislature February 21, 1949. The bill was sponsored by the West Virginia State Medical Association, and was passed by the legislature without opposition.

RESPIRATORS IN STATE LISTED

A list of adult cabinet size respirators, showing type, ownership and location, has been prepared by Sterling Evans, state representative of the National Foundation for Infantile Paralysis. The list, which will be of interest to all doctors for reference purposes, is as follows:

County	Description
Braxton	Emerson No. NC-79 (ac); owned by Moose Club; located at Eakle Hospital, Sutton.
Cabell	Drinker-Collins No. T-847 (ac); owned by Morris Memorial Hospital; located at Morris Memorial Hospital, Milton.
	Drinker-Collins No. 353 (ac); owned by Morris Memorial Hospital; located at Morris Memorial Hospital, Milton.
	Emerson No. DAE-793F owned by The National Foundation for Infantile Paralysis; located at Morris Memorial Hospital, Milton.
	Emerson No. 59 owned by Morris Memorial Hospital; located at Morris Memorial Hospital, Milton.
	Emerson No. 7 owned by Morris Memorial Hospital; located at Morris Memorial Hospital, Milton.
	Drinker-Collins No. 0528 owned by Huntington Orthopedic Hospital; located at Huntington Orthopedic Hospital, Huntington.
Fayette	American Iron Lung No. 532 owned by Fayette County Chapter, NFIP, Mount Hope; located at Marmet Crippled Children's Hospital, Marmet.
Hancock	Emerson OC-56 owned by Hancock County Chapter, NFIP; located at Weirton Hospital, Weirton.
Harrison	Emerson No. 676 owned by Clarksburg Fire Department; located at St. Mary's Hospital, Clarksburg.
Kanawha	Emerson No. PC9 owned by St. Francis Hospital; Located at St. Francis Hospital, Charleston.
	Emerson No. 137 owned by Kanawha County Chapter, NFIP, Charleston; located at Morris Memorial Hospital, Milton.
	Emerson No. PR30 (dc); owned by Marmet Crippled Children's Hospital; located at Marmet Crippled Children's Hospital, Marmet.
Lewis	Drinker-Collins No. T786 owned by Weston Fire Department; located at Weston City Hospital, Weston.
McDowell	Emerson No. KA-747 owned by The American Legion; located at Welch Emergency Hospital, Welch.
Marion	Drinker-Collins No. 652 owned by Fairmont Lions Club; located at Fairmont General Hospital, Fairmont.
Monongalia	Drinker-Collins No. T530 owned by Monongalia General Hospital; located at Monongalia General Hospital, Morgantown.
Mercer	Emerson No. KAW800 owned by Residents of City of Princeton; located at Princeton Fire Department, Princeton.
Ohio	Emerson No. C61 owned by Ohio Valley General Hospital; located at Ohio Valley General Hospital, Wheeling.
	Drinker-Collins No. T558 owned by Ohio Valley General Hospital; located at Ohio Valley General Hospital, Wheeling.
	Iron Lung located at Wheeling Hospital, Wheeling. (4-6-49)
Randolph	Drinker-Collins No. 151 owned by Davis Memorial Hospital; located at Davis Memorial Hospital, Elkins.
Wood	Emerson No. PC12 owned by Wood County Chapter, NFIP; located at Camden-Clark Hospital, Parkersburg.
Wyoming	Drinker-Collins No. T534 owned by Taylor Hospital; located at Taylor Hospital, Mullens.

HUNTINGTON DOCTORS HEAD AMA SECTIONS

Dr. Walter E. Vest, of Huntington, was elected chairman of the section on diseases of the chest at the annual meeting of the American Medical Association in Atlantic City early in June, and Dr. James R. Bloss, also of that city, was elected chairman of the section on obstetrics and gynecology. Both will serve until the annual meeting at San Francisco in 1950.

DOCTOR STARCHER WINS GOLF TOURNEY

Dr. Everett H. Starcher, of Logan, and Dr. E. T. Lentz, of Lebanon, Pennsylvania, were awarded silver trays as winners of the general practice section championship of the American Medical Golfer's Tournament, held in Atlantic City during the annual convention.

The grand championship cup was won by Dr. C. E. Moore, of Harrisburg, Pennsylvania, who turned in a 148 (71-77) for 36 holes. Doctor Moore was the winner two years ago by identical scores.

THE WEST VIRGINIA MEDICAL JOURNAL

302 ATLAS BUILDING, CHARLESTON, W. VA.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Editor
WALTER E. VEST, M. D.
955 Fourth Ave.
Huntington, W. Va.

Managing Editor and
Business Manager
MR. CHARLES LIVELY
Box 1031
Charleston 24, W. Va.

Associate Editors:
EDWARD J. VAN LIERE, M. D.
Morgantown, W. Va.
W. M. SHEPPE, M. D.
Wheeling, W. Va.
G. G. IRWIN, M. D.
Charleston, W. Va.
R. H. EDWARDS, M. D.
Welch, W. Va.

JAMES R. BLOSS, M. D., Editor Emeritus, Huntington

Vol. XLV AUGUST, 1949 No. 8

MODERN CONCEPTS OF ACUTE PANCREATITIS

By DONALD C. HAUGH, M. D.,
Beckley, West Virginia

In this paper the literature on acute pancreatitis is reviewed and the changes in medical concepts of the disease are discussed. Ten proven cases of acute pancreatitis were treated at the Beckley Hospital from 1945 to 1948, some of which are alluded to in illustration of certain points in this presentation. The diagnosis was established by findings of a definitely elevated serum amylase (4 cases), by the findings at operation (4 cases), and at autopsy (2 cases).

From the year that Fitz[1] described acute pancreatitis (1889) up until the last ten years, the general medical opinion has been that acute pancreatitis is a rare condition. Lewison[2], in 1940, reports an incidence of, roughly, one case in 3000 admissions at the Beth Israel Hospital of New York during the period from 1921 to 1939, and states that this is similar to the incidence reported by other American as well as English hospitals. He points out, however, that the actual percentage probably is much higher and that failure of the medical profession to consider pancreatitis as a possibility in acute abdominal conditions may be responsible for the reported low incidence. As in many other diseases once thought to be rare, the more acute pancreatitis is looked for, the more often it is encountered. Recently, Paxton and Payne[3] reported 307 cases at the Los Angeles County Hospital over a period of three years, or approximately one case in every 495 admissions, showing an incidence decidedly higher than previously reported.

Contrary to the old belief that acute pancreatitis must present a dramatic onset of severe abdominal pain and shock, it has been found that many cases exist in a milder form, and it is apparent that many of these milder forms go unrecognized. Furthermore, acute pancreatitis has no clear-cut clinical picture to distinguish it from other acute abdominal conditions, a fact which further increases the chances that it may be misdiagnosed. The method of determining the serum amylase activity was until recently a laborious and time-consuming procedure, and the introduction of a simple and accurate method of determining the serum amylase by Somogyi has been a major advance in the differential diagnosis of this disease. Elman[4], who has carried on an intensive study of acute pancreatitis for a number of years, has called attention to the frequency of acute pancreatitis and to the certainty with which it can be diagnosed by the elevated serum amylase. In 1944, he remarked, "This disease is not rare. I would say that pancreatitis exists in a sizeable proportion of the patients whom you see with signs of an acute abdominal emergency, and I include coronary thrombosis with epigastric pain."

CLINICAL CONSIDERATIONS

Age Incidence.—Acute pancreatitis may occur in all age groups but is most prevalent between the ages of 40 and 65. In this series the average age was 51. As to sex, it was formerly believed that it occurred mostly in men. Paxton and Payne[3], reporting 307 cases, the largest series yet published, found the highest incidence in women and the average age to be 49. Cunha[5] and Lewison[2] likewise have found women to be the most frequent sufferers from the disease. This is in keeping with the repeated association of acute pancreatitis with chronic biliary tract

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA

disease, another condition notoriously common in women.

Seasonal Incidence.—Paxton and Payne are of opinion that acute pancreatitis occurs more frequently during warm weather, as in their series there was a definitely higher incidence in the summer months. Lewison, reporting a considerably smaller series (35 cases), did not note a seasonal incidence.

Relation to Food Intake.—Many investigators have noted that the attack began soon after a heavy meal. Three (or 30 per cent) of the cases in this series gave this history. A large percentage of the patients will give a history of previous but less severe attacks.

Relationship of Alcoholism.—It has become increasingly apparent in recent years that alcoholism is an instigating factor in many of these cases. Four, or 40 per cent, of our cases gave a history of chronic alcoholism and two of the patients had onset of symptoms during an episode of heavy drinking. Paxton and Payne report that 18 per cent of their cases were admitted in an intoxicated state, or were recovering from an alcoholic bout.

PATHOGENESIS

Numerous articles have been written and countless experiments performed in an attempt to explain or determine the etiology of acute pancreatitis, but no completely satisfactory answer has yet been found. The main theories will be briefly considered below:

McWhorter[6], in 1932, classified the causes of acute pancreatitis into three main groups: (1) those due to infection, (2) those of noninfectious origin, and (3) a combination of two or more factors.

Fitz was the first American to give a complete presentation of the clinical and pathologic aspects of acute pancreatitis. In his celebrated paper published in 1889[1], he expressed the opinion that bacterial infection was primarily responsible. Von Schmeiden and Sebening[7], in 1927, found bacteria present in the peritoneal exudate in 103 cases and absent in 84 similar cases. Flexner[8], in 1900, was able to produce acute pancreatitis by injecting bacterial suspensions directly into the pancreatic duct. A theory that acute pancreatitis was the result of spread of infection from the diseased gallbladder along the lymphatics to the head of the pancreas enjoyed a considerable vogue for several years. However, it has been shown by the work of Bartels[9], Kodama[10] and others that there is no direct connection between the lymphatics of the interior of the pancreas with those of the gallbladder. Kaufman[11] and Wangensteen[12] have presented rather conclusive evidence that infection cannot spread from the gallbladder to the pancreas through the lymphatics. Wangensteen was unable to produce acute pancreatitis in dogs by the production of an acute biliary infection and even injected bacteria directly into the pancreas without producing pancreatitis. Bacteria have been demonstrated by Tower[13] to be present in the pancreas of normal experimental animals showing no evidence of pancreatitis, and it is probable that a similar condition may exist in man. Opie[14], as early as 1901, found that in the early stages of acute pancreatitis the lesions were sterile and it was not until the later stages of necrosis and hemorrhage that bacterial invasion took place. The theory of infectious origin has been practically abandoned of late and it is now thought that bacteria are either secondary invaders or that they enhance the proteolytic action of trypsin in producing pancreatic necrosis. In either case bacterial action is not considered the primary cause of pancreatitis.

Another theory that was very popular for a time was the "continuous channel" theory, first promulgated by Opie[14]. In 1901, he performed his now famous autopsy on a patient who died of acute pancreatitis. He found a gallstone lodged in the ampulla of Vater and demonstrated the presence of bile in the pancreatic duct. He postulated the theory that if the ampulla of Vater were blocked there would occur a reflux of bile into the common duct, and that this might produce pancreatitis. This theory presupposed the presence of a connection between the pancreas and common bile ducts at a point high enough to allow the flow of bile to clear the occluding stone. Opie found that the common bile duct joined the pancreatic duct in such a fashion in 90 out of 100 autopsies. However, Mann and Giordano[15] concluded that this condition was present in only 3.5 per cent of human subjects. Since then many series of autopsies have been presented in which the percentage with communicating ducts ranged all the way between these two extremes.

Archibald, one of the pioneers in experimental work on diseases of the pancreas, long has been an exponent of this "continuous channel" or "bile retrojection" theory[16]. It is his opinion that in cases in which the common channel exists, bile may pass through this channel back up into the pancreatic ducts, and that either a stone or, probably more frequently, spasm of the ampulla of Vater may produce the necessary obstruction. In cases in which there is no common channel, he suggests the possibility that the duodenal contents, presumably containing bile, pass back through the mouth of the pancreatic duct. How-

ever, in a series of experiments in which an attempt was made to force fluid in the duodenum under high pressure back through the papilla, Archibald was successful in only one instance. He concludes that this latter sequence of events could apply in only a small number of cases.

In support of his belief that bile causes pancreatitis, Archibald has been able to produce pancreatic necrosis in a number of experiments[16] in which a cannula was tied in the pancreatic duct and connected by a tube to a funnel. Infected bile was introduced into the funnel (which was held at a height of 20 cm.) drop by drop with resultant pancreatic edema and necrosis in the space of a few minutes. Clean bile and duodenal contents produced the same result but to a lesser degree. He believes that this is due to the higher proportion of free bile acids in infected bile. In another series of experiments, Archibald and his co-worker, Webster[16], immersed pieces of pancreatic tissue in test tubes containing respectively bile, trypsinogen collected from a pancreatic fistula, the same activated with succus entericus, and the same mixed with bile. In no case did the trypsin produce necrosis except in the bile-trypsin mixture and in that instance the degree of necrosis was the same as in the tube containing bile alone. However, other experimenters have shown that if the pancreas has been stimulated to produce a secretion rich in enzymes, this secretion will produce necrosis where a thin secretion, low in enzyme content, will not. This will be discussed in more detail further on.

Many questions arise when the "common-channel" or "bile-retrojection" theory is considered. In the first place, a number of cases of acute pancreatitis have been found in human beings in which the duct of Wirsung opened separately into the duodenum. Mann and Giordano[15] reported 11 such cases. There have been cited also [17, 18, 19] cases of acute pancreatitis involving the area drained by the duct of Santorini, which has no connection with the common bile duct but opens separately into the duodenum. Secondly, roentgengraphic studies have been made recently of patients who have had a T tube placed in the common bile duct, and the results do not support the theory that the presence of bile in the pancreatic ducts will produce pancreatitis. According to Lewison[2], reflux of bile into the duct of Wirsung has been shown to occur in approximately 25 per cent of these cases, yet acute pancreatitis does not develop. Against the theory of spasm of the sphincter of Oddi producing a common channel is the fact, demonstrated by Boyden[20], that the circular layer of muscle in the sphincter is also common to the pancreatic and common bile ducts, so that spasm of the sphincter would spread to these two ducts, thereby shutting off any communication between the two.

Another theory that has attracted much attention is that acute pancreatitis is caused by obstruction of the flow of pancreatic juice when the latter is rich in enzymes, as after a heavy meal. This has been demonstrated experimentally by several observers. Wangensteen and his co-workers[12] and others have been able to produce acute pancreatitis by ligating the pancreatic ducts and injecting the animals with a parasympathomimetic drug such as pilocarpine, acetyl choline and secretin. Hess[21] was able to produce the same result by ligating the pancreatic ducts in dogs at the height of digestion. This did not happen if the dogs were starved at the time of ligation. As Lium and Maddock[22] have pointed out, the two important factors in producing acute pancreatitis in this way are (1) obstruction of the pancreatic secretion in (2) the presence of an actively secreting gland. In their carefully controlled experiments Lium and Maddock demonstrated that acute pancreatic inflammation and fat necrosis could be produced in cats by ligating the pancreatic ducts and stimulating the pancreas by feeding, by injecting the animal with parasympathomimetic drugs, or by stimulation of the vagus. Feeding the animal two hours before ligation of the ducts produced the most extensive and consistent damage. They reconstruct the development of pathology as follows: the pancreas is secreting actively and suddenly the ducts are obstructed. The pancreatic juice, under increased pressure, ruptures the ducts which run along the interlobar septa, and the escaping secretion causes inflammation in the adjacent parenchyma. The intensity of the reaction will depend on two factors, namely, the degree of obstruction and the enzymatic concentration of the juice. If the obstruction is partial or brief in duration and the enzymatic concentration low, a mild degree of inflammation results. If the obstruction is complete and the pancreatic secretion rich in enzymes, the extruded juice will cause necrosis, first of the acini on the periphery of the lobules and then, as it penetrates further into the gland, of the more centrally located acini. The ducts will rupture at their weaker points and not throughout their length, so the distribution will be patchy. This patchy distribution of necrosis and hemorrhage often is seen at operation or at autopsy on human beings having acute pancreatitis.

As to the cause of the obstruction, it has been suspected that edema and spasm of the smooth

muscle in the sphincter of Oddi and the pancreatic ducts may be responsible. Archibald[23] demonstrated that fluid introduced into the biliary tree of cats under a high constant manometric pressure was seen to enter the duodenum at intervals rather than as a constant flow. This spasm of the sphincter has been observed by other investigators. Von Anrep[24] found in animal experiments that when the vagus was stimulated, the pancreas at first increased in size but there was no secretion from the ducts. As vagal stimulation was continued the secretion began to pour from the ducts, and with this outpouring there was a steady diminution in the size of the gland until it reached its normal size at the height of secretion. The early swelling of the pancreas and lack of secretion, he believed, were due to spasm of the ducts and that with the relaxation of the muscle in the duct walls, the flow of secretion and diminution of swelling began.

Although the last-mentioned theory is growing in popularity, the fact remains that the etiology of acute pancreatitis still is not entirely clear. Wangensteen and his co-workers[12], after a thorough experimental study of the subject, came to the conclusion that several factors may act in combination to produce the disease.

SIGNS AND SYMPTOMS

The main difficulty in the diagnosis of acute pancreatitis is the previously mentioned lack of a characteristic symptom complex. It may closely simulate perforated peptic ulcer, coronary occlusion, acute cholecystitis, small bowel obstruction or even appendicitis. For this reason, it is not uncommon for the examining physician to miss the diagnosis; in fact, a survey of the literature shows that the diagnosis is made more often at operation or autopsy than at the bedside. Even when acute pancreatitis is considered, it may be impossible to rule out perforated peptic ulcer or some other abdominal emergency without an exploratory laparotomy.

The three predominating symptoms are pain, nausea and vomiting. Eighty-five to 95 per cent of patients will have abdominal pain, although this need not be as severe as was formerly thought. The pain may be epigastric in location, epigastric with radiation to the back, or epigastric first and generalized later. It may begin also in the right upper quadrant and radiate through to the back, simulating acute cholecystitis. On examination, unilateral or bilateral flank tenderness and pain usually are found. In approximately 5 per cent of the cases in the series of Paxton and Payne, pain developed in the suprapubic area with radiation to one or both flanks. These observers state that in the presence of this unusual distribution of pain, acute pancreatitis should be considered.

Nausea and vomiting are present in 80 to 90 per cent of cases. These symptoms appear early and are fairly persistent. Later, vomiting is variable, depending on the degree of ileus or on the degree of obstruction in the pancreatic ducts.

Paxton and Payne classify the cases from a clinical standpoint into five groups as follows:

Group I presents the picture described so colorfully by Moynihan[25], in 1925. He stated that the pain of acute pancreatitis is by far the worst of all the pains that the human body can suffer. The archetype of this group is the elderly, overweight individual who has eaten a heavy meal possibly preceded by several drinks. He is suddenly seized by an excruciating epigastric pain radiating to the left and followed by nausea and vomiting. This is generally accompanied by profound shock and in some cases by a slate gray color of the flanks (Gray Turner's sign) and around the umbilicus (Cullen's sign). There is diffuse abdominal tenderness and perhaps rigidity. Death usually follows in twenty-four to forty-eight hours, although in case 2 presented herein, the patient lived for nearly five days after the onset and at autopsy the pancreas was found to be necrotic throughout. Peristalsis is infrequent or absent. In this group the diagnosis is frequently coronary occlusion.

Group II simulates acute cholecystitis. The pain begins suddenly in the epigastrium or right upper quadrant and is moderately severe. It may radiate through to the back and is soon followed by nausea and vomiting. The patient may give a history of previous attacks.

Group III resembles small bowel obstruction, yet there may be no apparent reason for the obstruction such as an operative scar or abdominal hernia. Any patient with signs and symptoms of small bowel obstruction with no obvious cause should have serum and urinary amylase determinations made before operation is considered.

Group IV may be mistaken for acute gastritis resulting from alcoholism. The patient gives a history of a prolonged alcoholic bout prior to the onset of abdominal pain, violent nausea and vomiting. There may be a slight degree of upper abdominal rigidity so that the presence of a perforated, slowly leaking peptic ulcer often is suspected. As alcoholism is so frequently found to be associated with acute pancreatitis, a determination of the serum and urinary amylase is again an important diagnostic aid.

Group V is composed of those cases in which pancreatic cysts have developed and are the occasional end results of acute pancreatitis. These patients give a history of severe upper abdominal pain, nausea and vomiting occurring from one to several weeks prior to admission, which subsided after a few days. Subsequently they have intermittent mild to severe attacks and may notice a tender mass in the epigastrium or left upper quadrant. The mass represents a pancreatic abscess or pseudocyst. These are satisfactorily treated by simple drainage or marsupialization.

In a small percentage of cases, diarrhea, hematemesis or bloody diarrhea is noted. Paxton and Payne report 24 cases presenting massive gastrointestinal hemorrhage presenting as bloody diarrhea or vomitus. At autopsy, areas of hemorrhagic ulcertation were found in the stomach, small intestine and colon. They believe this is due to the lytic action of the pancreatic ferments on these structures.

ASSOCIATED PATHOLOGY

By far the most frequent associated pathology is biliary tract disease. In this series, five, or 50 per cent, of the cases had associated chronic cholecystitis. Various authors give a wide range of percentages but in the larger series, biliary tract disease was found to be present in 40 to 60 per cent of cases. Henderson and King[26] found associated cholecystitis in 55 per cent of 60 cases of acute pancreatitis. Molander and Bell[27] reviewed 41,333 autopsies and of the 158 cases of acute pancreatitis, the incidence of cholelithiasis was found to be six times greater than in all cases reviewed. Alcoholism is the next most frequent concomitant of acute pancreatitis, being associated in 18 per cent of cases in the series of Paxton and Payne[3]. Weiner and Tenant[28], in reviewing 4000 autopsies, found that in 53 per cent of cases of acute alcoholism there was an associated acute pancreatitis.

LABORATORY DIAGNOSIS AIDS

Serum Amylase.—The serum amylase determination probably is the most important diagnostic aid from the laboratory standpoint. By the use of Somogyi's test or modifications thereof, it is possible to make a quick and accurate determination of the serum amylase. In regard to the diagnostic importance of this determination, Lewison[2] states, "Several hundred routine serum amylase determinations with a modified Somogyi technique but similar standards have given convincing evidence that the normal level of amylase remains within constant limits in practically all types of disease except acute pancreatitis, in which there is a sudden and significant marked rise." However, this level usually reaches its peak in the first forty-eight hours after onset and may drop to normal within the next forty-eight hours. For this reason, the time since onset must be considered in evaluating the results of this test. The urinary amylase usually becomes elevated from twelve to twenty-four hours later than the serum amylase and will remain elevated twenty-four hours or more longer than the serum amylase. There is occasionally considerable variability in these time elements. It is best to determine the serum and urinary amylase levels simultaneously as one may be normal and the other elevated due to the variance in their time cycles. It must be remebered that in widespread destruction of the gland, the serum and urinary amylase levels may be normal or subnormal, probably because the gland is no longer able to produce enzymes.

Blood Calcium.—Pancreatic lipase acts upon fats, splitting them into glycerol and free fatty acids. The calcium unites with the fatty acids to form soaps and the blood calcium consequently will be low. The depletion of calcium may be sufficient to produce tetany.

X-ray.—A segmental ileus is seen late in the disease in 55 to 65 per cent of cases, the transverse colon being most frequently involved.

Glycosuria.—Some cases of acute pancreatitis will have hyperglycemia and glycosuria. Since these conditions are relatively uncommon, the tests therefor are not helpful.

TREATMENT

Until the last fifteen years, there was a total lack of agreement as to the comparative advantages of surgical and medical treatment. Observers such as Korte[29], Abell[30], MacWhorter[6] and Jones[31] favored immediate operation while those equally prominent such as Wangensteen[32], Nordman[33] and Lewis[34] recommended conservative measures. The latter view has grown steadily in popularity until at present the consensus is in favor of conservative management. The mortality rates of the two types of treatment bear out the soundness of this view. Paxton and Payne report 46 deaths in 103 cases operated upon, a mortality rate of 44.7 per cent. Of the 188 cases treated without surgery there were 40 deaths, a mortality rate of 21.3 per cent. Other series of cases show slight variations in percentages, but in every instance the mortality rate is considerably lower in the conservatively treated group. Cunha[5], in speaking of the earlier dictum of immediate surgery, states, "As we look back in retrospect, it is hardly probable that the mere suctioning off of some hemorrhagic fluid was of any help to the patient. Those who did

survive did so by the Grace of God and a strong constitution, and not because of any surgery."

The major difficulty in conservative treatment is that it is sometimes impossible to rule out ruptured peptic ulcer or intestinal obstruction. In case of reasonable doubt it is best to operate, as the latter two conditions are more common than acute pancreatitis. If the diagnosis of acute pancreatitis is established and conservative treatment adopted, good surgical judgment should still prevail during the full time the patient is under observation. The possibility of abscess formation during the first two days is remote. Suppuration usually is indicated by an elevation of temperature and white count, increase in abdominal rigidity and failure of the symptoms to subside after two or three days of supportive therapy. In this case it is best to operate and the least extensive procedure is the best. If an abscess is present, it is evacuated and drained. If only necrosis and hemorrhage are found, some surgeons advise splitting the capsule of the pancreas; others claim that this is conclusive to additional hemorrhage and merely place rubber tissue drains in the lesser peritoneal sac and on top of the pancreas.

CONSERVATIVE TREATMENT

The object of conservative treatment is to put the pancreas at rest and to alleviate obstruction of the ducts draining the gland. The salient features of the treatment are as follows:

(1) Gastrointestinal suction. This prevents food and acid gastric contents from entering the duodenum and thus reduces the hormonal stimulation of the pancreas. A second advantage is that it decompresses the stomach and duodenum in cases in which the head of the pancreas may be so swollen that it produces a duodenal obstruction.

(2) Parenteral fluids. The patient should receive between 3,000 and 4,000 cc. of 5 per cent glucose in normal saline and distilled water daily. Some authors state that sufficient insulin should be added to the infusions to cover the glucose contained, so that the pancreas will not be called upon to supply the necessary insulin; others say that this is not necessary.

(3) Narcotics and antispasmodics. Morphine sulfate in doses of 1/6 to 1/4 grain is used to control pain. Demerol and dolophine are advocated by some because of their antispasmodic effect on smooth muscle in addition to pain relief. Paravertebral block (T4-T9) is said to give remarkable relief from pain, also preventing sympathetic stimulation to external pancreatic secretion. Atropine sulfate is given regularly in doses of 1/75 to 1/150 grain to suppress the vagus mechanism, as vagal stimulation produces a pancreatic secretion rich in enzymes. In regard to the value of antispasmodics, Elman[35] has called attention to the part spasm of smooth muscle in the pancreatic ducts seems to play in acute pancreatitis and states that glyceryl trinitrate, when given early, will often abort the attack.

The foregoing regimen should be followed for at least forty-eight hours after the temperature has returned to normal even though the other symptoms have disappeared. Paxton and Payne[3] have found that if gastric suction is discontinued and feeding started before the patient has been afebrile for forty-eight hours, there is a strong likelihood of recurrence. Cole[36] advises that after the patient has been asymptomatic for a week or so, cholecystograms should be made to determine the state of the gallbladder. Since acute pancreatitis so often is found to co-exist with chronic biliary tract disease, it is considered good prophylactic surgery to remove the gallbladder if it is found to be diseased, thus preventing possible recurrences.

CASE REPORTS

Case 1.—E. C., a 59 year old housewife, white, was admitted to the Beckley Hospital October 4, 1948, for treatment of a corneal ulcer sustained when she accidentally scratched the eye with a stick nine days previously. She was immediately given treatment as indicated which included penicillin. On October 5, she was given 20,000,000 killed typhoid organisms intravenously at 1:30 p. m., approximately thirty minutes after eating her lunch. At approximately 4:00 p. m., the patient was seized with a severe chill lasting ten minutes. Her temperature at that time was 100.8 F. She began to complain of pain in the upper abdomen, most marked in the epigastrium, which was soon followed by nausea and vomiting. She vomited three times that night and complained of considerable pain, requiring 1/4 grain of morphine. She complained of some nausea at intervals throughout the night. However, the following morning she felt somewhat better. In the afternoon she began to complain of generalized abdominal pain, and vomited on two occasions. The surgical service was called in consultation at that time. The following history and findings were obtained: Except for the corneal ulcer the patient had been in good health for some time prior to admission to the hospital. She gave a history of having had cholecystectomy in 1936 and appendectomy in 1927. She had had occasional attacks of moderately severe pain in the upper abdomen but these usually cleared up spontaneously in a day or two. She had had two such attacks since her cholecystectomy in

1936. The remainder of the history was essentially negative. Physical examination: The patient was obsese. The lungs and heart were normal, the blood pressure 128-84. There was generalized abdominal tenderness, most marked in the upper half. There was slight distention but no muscle rigidity. Peristalsis appeared to be normal. A right upper quadrant scar and a McBurney scar were noted. Pelvic and rectal examinations were negative. Laboratory: The leukocyte count was 12,750, the red count 5,590,000; hemoglobin was 115%. Urinalysis was negative. A tentative diagnosis of incomplete intestinal obstruction due to operative adhesions was made. A Levin tube was passed for continuous gastric suction, and intravenous fluids were started. The next day the patient was more comfortable and the distention had subsided. A flat plate of the abdomen disclosed nothing unusual; the tip of the suction tube was seen to lie in the pyloric third of the stomach. The temperature was 100.6 F. and the white count 16,650 with 91% polymorphonuclears. An enema was given with fairly good results. The succeeding day, the patient's condition appeared to be worse. The abdominal pain and tenderness were more severe and the white count had risen to 17,600. A perforated, slowly leaking peptic ulcer or partial intestinal obstruction were considered the most likely possibilities and it was decided that an exploratory operation should be done.

With the patient under spinal anesthesia the abdomen was opened through a right rectus incision. On opening the peritoneum approximately 2,000 cc. of serosanguineous fluid was encountered. There were small areas of fat necrosis scattered throughout the abdomen and the pancreas was edematous with areas of focal necrosis. The head of the pancreas appeared to be particularly involved. The capsule was incised and drains were placed about the head of the pancreas, in the foramen of Winslow and in the right colic gutter. These were brought out through a stab wound in the right flank and the abdomen was closed.

The patient's postoperative course was stormy, featured by slight atelectasis of both lung bases and continued nausea and abdominal pain. Gastric suction was maintained and glucose in saline containing large doses of B complex and vitamin C were administered intravenously. Intravenous calcium gluconate was given on the day of operation and twice on the following day to prevent any appreciable drop in the blood calcium. Large doses of penicillin and streptomycin were given at six hour intervals. Pantopon and atropine sulfate were given regularly. On the second postoperative day she felt considerably better, complaining only of irritation from the gastric tube which was clamped off for alternating two hour periods, and clear liquids started. The abdominal pain and nausea recurred, however, necessitating resumption of continuous gastric suction and discontinuation of oral fluids. The blood amylase on the morning after operation was 256 units and continued to show levels as high as 500 units until October 16 when it returned to normal, on that date being 64 units. The temperature was normal and the patient had no abdominal pain. Gastric suction was discontinued and water was given in small amounts by mouth. The diet was gradually augmented until October 23 when a soft, low fat diet was started. A slight separation of the upper pole of the incision, first noted on the 6th postoperative day, healed gradually after a few days. On October 30, the patient was asymptomatic and afebrile. She had been up and about for several days and had been taking a soft, low fat diet without difficulty except for occasional slight nausea. The wound was completely healed and the corneal ulcer also appeared to be well healed. She was discharged with instructions to continue on the diet as given in the hospital and to return at intervals for re-examination. On these return visits she stated that her appetite was good and that she had no nausea or abdominal pain. She had three to four semisoft bowel movements daily. On November 26 the patient returned, complaining of recurrence of pain in the left eye and was admitted for further treatment to the eye. She was given penicillin, 40,000 units every three hours and warm compresses. On the night of admission she had an attack of nausea and vomiting which was believed to be due to being put on a regular diet on admission to the hospital. All feeding was discontinued and intravenous fluids were given for twenty-four hours with subsidence of symptoms. The diet was increased gradually for several days until by December 1 she was taking a full diet and was asymptomatic. She was discharged on that date with the corneal ulcer healed. The patient returned on December 14 and January 3 to the Outpatient Clinic, at which times she had no complaints and stated that she had been taking a full diet without difficulty.

It is not too surprising that of the several staff members who examined the patient preoperatively, none suggested that it was a case of acute pancreatitis. The textbook picture of a sudden onset of excruciating pain in the epigastrium, radiating to the left, was certainly absent in this case. Indeed, a serum amylase taken approximately two hours after operation was 64

units, well within the normal range by the method used. Even had acute pancreatitis been suspected it would have been difficult to rule out intestinal obstruction or a perforated, slowly leaking peptic ulcer. The possibilities of reaction to the typhoid organisms or other medication being given for the corneal ulcer also somewhat confused the picture. It is interesting to speculate on the part the injection of typhoid organisms had on the onset in this case. The injection was given shortly after eating and this may have produced a spasm of the pancreatic ducts, thereby fulfilling the two requirements necessary for the production of experimental pancreatitis, i. e., obstruction of the pancreatic ducts in the presence of an actively secreting gland.

Case 2.—E. H., a 58 year old white male, was admitted October 27, 1947. He gave a history of being well until 24 hours prior to admission when he had a sudden onset of severe cramping pain in the epigastrium. He was a heavy consumer of alcohol and had taken an indeterminate amount on the day of onset. The pain persisted throughout the night after onset and was accompanied by extreme nausea. However, the patient did not vomit until about 18 hours after he first noted the pain. The bowel habit had been normal, and the last movement was on the day before admission. He consulted his local physician about six hours before coming to the hospital and was given morphine sulfate for relief of pain. There had been no similar attacks but three years previously he had had an attack of pain in the precordial region which was attributed to "heart trouble" by his physician. The patient was obese. He appeared to be gravely ill, was perspiring profusely, and the skin felt cold to touch. The pulse was weak and the rate was 110. The chest was clear to percussion and ausculation and the heart sounds were distant but regular, the blood pressure being 92 systolic and 70 diastolic. The abdomen was exquisitely tender in the left upper quadrant and there was marked generalized tenderness. Moderate muscle rigidity was present in the upper abdomen, most marked in the left upper quadrant. There was no evidence of free fluid in the peritoneum. Slight cyanosis of the abdomen was noted. Otherwise, the examination was negative. The leukocyte count was 20,350 with 92% polymorphonuclear. The hemoglobin was 94% and the red count 4,759,000. The urine was normal. The possibilities of acute pancreatitis, perforated peptic ulcer and intestinal obstruction were considered. The problem of immediate treatment was a serious one. With the laboratory method used at that time, it would have taken three or four hours to determine the serum amylase. There appeared to be no way definitely to rule out the possibility of a perforated peptic ulcer and it was felt that because of the patient's serious condition delay was to be avoided. He was given 1000 cc. of 5% glucose in normal saline as the correct type of blood was not then available. A gastric tube was inserted and the patient prepared for an exploratory laparotomy. Open drop ether was used as the anesthetic. The abdomen was entered through a left rectus, muscle-splitting incision. A considerable amount of odorless yellowish fluid containing fat droplets was encountered. The pancreas was found to be tremendously enlarged, necrotic and hemorrhagic, the head measuring approximately 11 cm. in width. The pancreatic tissue was extremely friable and several small pieces broke loose at the time of exploration. The remainder of the abdominal organs appeared to be intact. The abdomen was closed in layers and the patient left the operating room in a critical condition. He was maintained on continuous gastric suction and received intravenous glucose in saline and distilled water. On the day following operation he received adrenal cortex and 1000 cc. of whole blood, with slight improvement in his general condition. The blood amylase determination on the day following operation showed only a slight increase in activity, apparently due to the fact that most of the patient's pancreatic tissue was destroyed. His condition grew gradually worse thereafter, and in spite of further blood transfusions and other supportive measures he expired on the fourth postoperative day. An autopsy was performed and the pathologic report of the abdominal findings was as follows: "The abdomen is markedly distended. There is considerable post mortem lividity of the skin. On opening the peritoneal cavity approximately 1000 cc. of serosanguineous fluid is encountered. A tremendous mass is found in the region of the pancreas, approximately 25 cm. in diameter. Numerous areas of fat necrosis can be seen in the omentum and surrounding the pancreas. On incising the pancreatic capsule a large amount of blood-tinged fluid is encountered and the entire organ appears to be hemorrhagic and necrotic. Anatomical diagnosis: Acute hemorrhagic pancreatitis."

This patient's clinical picture more nearly fits the description of the disease usually given in textbooks. It is interesting to note that in spite of the severe involvement of the pancreas at the time of operation he lived for four days thereafter.

Case 3.—I. W., a 61 year old white male, entered the hospital September 21, 1948, complaining of acute upper abdominal pain. He stated

that he was awakened at 3:00 a. m. on the day of admission with severe epigastric pain, accompanied by vomiting. There was a normal bowel history, no recent cough, cold or fever. The patient was a heavy habitual user of alcohol and had been drinking the evening prior to onset. He had had several previous attacks of pain and had been treated in another hospital about a month before admission, apparently for a similar attack of pain. The history was otherwise negative. The patient was extremely obese. The heart and lungs were normal. The blood pressure was 122 systolic and 86 diastolic. The abdomen was slightly distended and was tender throughout the upper half. No masses, solid organs or rigidity were noted. There were no operative scars. Rectal examination revealed no masses or other pathology. The extremities were negative. The leukocyte count was 29,250 with a polymorphonuclear count of 91%. The hemoglobin was 104%. Urinalysis was negative; the blood urea nitrogen was 18.1. Chronic cholecystitis with an acute exacerbation, and acute pancreatitis were listed as first and second probable diagnoses. Continuous gastric suction was started and intravenous glucose in saline with large doses of vitamin C and B complex was given. Morphine sulfate and atropine sulfate were given regularly. Serum amylase determination the day after admission was 32 units. The patient showed little improvement in his condition over the next few days. He ran a low grade fever and although the abdominal pain lessened somewhat, it did not entirely clear up and he was uncomfortable most of the time. A barium enema on September 9 revealed no pathology of the colon and a gastrointestinal series on the following day likewise was negative. A cholecystogram made on September 13 showed stones. The patient's white count and temperature gradually returned to normal. However, he continued to show small elevations of temperature to a 100 F. or less on several occasions and to have intermittent attacks of mild to moderately severe abdominal pain. On two occasions the Levin tube was removed and fluids by mouth started, but the abdominal pain, nausea and vomiting returned, necessitating the resumption of gastric suction and the discontinuance of feedings. By September 17, however, the gastric suction was discontinued and he was able to take a gradually increased diet without vomiting. Agglutinations for the various Brucella organisms were run but the results were negative. By September 21, the patient had been afebrile for four days and was comfortable except for occasional abdominal discomfort and distention. He was discharged on a soft, light diet which he had been receiving in the hospital, with instructions to rest at home and return in a few days for re-examination. Approximately a week later word was received from the patient that he had had a recurrence of his symptoms and was leaving for a hospital in Baltimore for further treatment. A laparotomy was performed there at which time a pancreatic abscess was found and drained. Other findings were a chronically inflamed gallbladder containing several stones. The patient's course went steadily downhill and he expired a few days after operation. The postmortem diagnosis was abscess of the pancreas with widespread pancreatic necrosis.

SUMMARY

1. The recent changes in concepts of the etiology, associated pathology, incidence, diagnosis and treatment of acute pancreatitis are reviewed.

2. Three case reports of acute pancreatitis treated in the Beckley Hospital are given to illustrate the diagnostic difficulties of the disease.

3. Acute pancreatitis is a dangerous disease and is not as rare as was formerly believed.

4. Conservative treatment has been found to render a considerably lower mortality rate than operative intervention and the consensus at the present time is that conservative management is the treatment of choice.

REFERENCES

1. Fitz, Reginald H.: Acute Pancreatitis. A consideration of Pancreatic Hemorrhage, Hemmorhagic, Suppurative, and Gangrenous Pancreatitis, and of disseminated Fat-Necrosis, Boston M. & S. J. 120:181, 205, 229, 1889.
2. Lewison, E. F.: Acute Pancreatitis. An Etiologic Review and Report of Thirty-five Cases, Arch. Surg. 41:1008, (Oct.) 1940.
3. Paxton, J. R. & Payne, J. H.: Acute Pancreatitis. A Statistical Review of 307 Established Cases of Acute Pancreatitis, S. G. & O. 86:69-75 (Jan.) 1948.
4. Elman, Robert, In discussion of: Johnson, W. M., Davis, O. T.: Pancreatitis. An analysis of twenty-two cases, South. M. J. 38:373-379 (June) 1945.
5. Cunha, Felix: Diagnosis and Treatment of Pancreatic Disease, Am. J. Surg. 58:16-28, (Oct.) 1942.
6. McWhorter, G. L.: Acute Pancreatitis, 25:958-990 (Nov.) 1932.
7. Schmeiden, V., and Sebening, W.: Chirurgie des Pankreas, Arch. f. Klin. Chir. 148:319-387, 1927; abstracted, Surg., Gynec. & Obstet. 46:735-751 (June) 1928.
8. Flexner, S.: Experimental Pancreatitis, Johns Hopkins Hospital Rep. 9:743-771, 1900.
9. Experiments of Bartels, as described in: Archibald, Edward: A Discussion of the Theories Concerning the Causation of Acute Pancreatitis. Proceedings Instit. Med. Chicago. 134-147, (June) 1940.
10. Kodama, S.: Lymphatics of Extrahepatic Biliary Passages, Surg., Gynec. & Obst. 43:140-146 (Aug.) 1926.
11. Kaufman, M.: Experimental Study of Lymphatic Theory of Pancreatitis, Surg., Gynec. & Obst. 44: 15-22 (Jan.) 1927.

12. Wangensteen, O. H., Leven, N. L., and Manson, M. N.: Acute Pancreatitis (Pancreatic Necrosis): Experimental and Clinical Study, with Special Reference to Significance of Biliary Tract Factor, Arch. Surg. 23:47-73 (July) 1931.
13. Tower, L. E.: Pathologic Physiology of Experimental Gangrenous Pancreatitis, J. A. M. A. 86:1112-1113 (April 10) 1926.
14. Opie, E. L.: The Etiology of Acute Hemorrhagic Pancreatitis, Bull. Johns Hopkins Hospital 12:182-188, 1901.
15. Mann, F. C., and Giordano, A. S.: Bile Factor in Pancreatitis, Arch. Surg. 6:1-30 (Jan., Pt. 1) 1923.
16. Archibald, Edward: A Discussion of the Theories Concerning the Causation of Acute Pancreatitis, Proc. Instit. Med. Chicago. 13:134-147 (June 15) 1940.
17. Dardinski, J.: Am. J. Path. 7:169, 1931.
18. Bassett, J. H.: Tr. Chicago Path. Sec. 7:83, 1907.
19. Johnstone, O. P.: Colorado Med. 4:93, 1907.
20. Boyden, E. A.: Sphincter of Oddi in Man and Certain Representative Mammals, Surgery 1:25-37 (Jan.) 1937.
21. Hess, O.: Experimentelles zur Pankreas und Fettgewebsnekrose, Mitt. a. d. Grenzgeb. d. Med. u. Chir. 19:637-677, 1909.
22. Lium, Rolf, and Maddock, Stephen: Etiology of Acute Pancreatitis, Surgery 24:593-604 (Oct.) 1948.
23. Archibald, Edward: Lewis' Practice of Surgery, Vol. 7, Hagerstown, Md., 1933, W. F. Pryor Co., Inc., p. 1.
24. Von Anrep, G.: J. Physiol. 50:421-433, 1915-16.
25. Moynihan, B.: Acute Pancreatitis, Ann. Surg. 81: 132-142 (Jan.) 1925.
26. Henderson, F. F. and King, E. S. A.: Acute Pancreatitis, Arch. Surg., 30:1049-1057, 1935.
27. Molander, D. W. and Bell, E. T.: Relation of Cholelithiasis to Hemorrhagic Pancreatitis, Arch. Path., 41:17-19, 1946.
28. Wiener, H. A., and Tennant, R.: Statistical Study of Acute Hemorrhagic Pancreatitis, Am. J. M. Sci. 196: 167-176 (Aug.) 1938.
29. Korte, W.: Die Chirurgischen Krankheiten und die Verletzungen des Pankreas, Stuttgart, F. Enke, 1898.
30. Abell, I.: Acute Pancreatitis, Surg., Gynec. & Obst. 66:348-353 (Feb.) 1938.
31. Jones, D. F.: Am. J. Digest. Dis. & Nutrition 3:686, 1936.
32. Wangensteen, O. H.: Acute Pancreatic Necrosis with Comments of Diagnosis and Therapy, Minnesota Med. 15:201-206 (March) 1932.
33. Nordman, O., quoted by Lewison, E. F.: (reference 3).
34. Lewis, D.: Hemorrhagic Pancreatitis; Causes of, Symptoms, and Treatment New York State J. Med. 36:1015-1019 (July 15) 1936.
35. Elman, Robert: J. A. M. A. 118:1265-1268, 1942.
36. Cole, W. H.: The Treatment of Acute Pancreatitis. Collective review, International Abstract of Surg. 67:31-38 (July) 1938.

CANCER OF THE LARYNX

Cancer of the larynx spares no age group. Chronic hoarseness should lead one to suspect malignant disease of that organ. A thorough examination of the larynx by either indirect or direct laryngoscopy is indicated in all cases. At that time a careful biopsy should be taken of any suspicious looking tissue. If one biopsy is inconclusive, a second should be taken. Failure to do so is considered negligence.

Cancer of the larynx is curable in its early stages; therefore, early recognition is paramount.—P. E. Provost, M. D., in J. Maine Med. Assn.

ACUTE PERFORATION OF GASTRO-DUODENAL ULCER

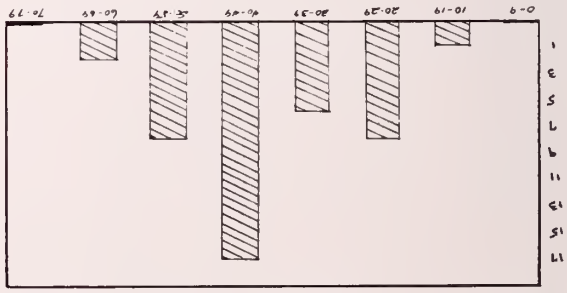
Report of Forty-two Cases

By R. M. GERMAN, JR., M. D., and A. U. TIECHE, M. D., Beckley, West Virginia

The following is a report of forty-two cases of perforated gastroduodenal ulcers treated in the Beckley Hospital during the eight year period from January 1, 1941 to January 1, 1949. All cases were proved to have perforation either by operative findings or by post mortem examination. During this period there have been other cases diagnosed tentatively as perforation which for various reasons were not subjected to operation, or in which post mortem examination was not permitted. Such cases have not been included in this report. All patients in whose cases the diagnosis of acute gastroduodenal perforation was made underwent operation in as short a time as possible, provided the general physical status permitted. Two cases are included in which a diagnosis of acute appendicitis was made preoperatively, with the findings of perforated ulcer at operation. Four other cases are included in which the patients were admitted in terminal states and in which the diagnoses were proved at autopsy.

INCIDENCE

The period of this report covers eight years during which time there were 9,388 admissions to the surgical service of the hospital. Forty-two patients were admitted during that time with acute gastroduodenal perforations, an average of six patients per year, an incidence of 0.45 per cent. This incidence is in accord with reports of other authors who report incidences of 0.37 to 0.66 per cent. The seasonal variation is in similar agreement with other reports in which the time of highest incidence occurred in the fall of the

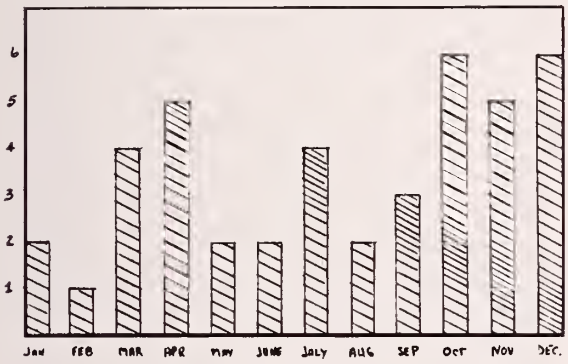


year with an additional peak in the late spring. The distribution is shown graphically by (figure 1).

AGE

Grouping the cases by age showed that by far the greater incidence of perforation occurred in the fifth decade of life, seventeen of the patients falling into this group. However, ages of patients

treated extended from fourteen to sixty-three, the youngest being a Negro male of fourteen, the oldest a white man of sixty-three years. The next highest incidence of perforation occurred in the third and sixth decades, there being eight patients in each decade. This compares favorably with the reports of others, in which the decade of highest incidence of perforation are the fifth and sixth. In only one case of our series was there an incidence of repeated perforation, the first perforation having occurred about seven years prior to the second and not falling within the period covered by this report (figure 2).



PREVIOUS ULCER HISTORY

In six patients it was definitely stated that there was no previous history of ulcer symptoms, an incidence of 14.2 per cent. In eleven cases, or 26.1 per cent, the history obtained was inadequate in this respect, there being no statement as to the length of symptoms prior to perforation. In the remaining twenty-five cases, four patients, or 9.5 per cent, gave histories of ulcer symptoms of less than ten days' duration. In another group of four patients there were histories varying from two to four weeks and in the remaining seventeen, or 40.4 per cent, the histories varied over periods of one to eighteen years. Because of the fact that in one-fourth of the cases the history is inadequate, we are unable to draw conclusions of relative value from this series with regard to this respect.

RACE AND SEX DIFFERENCES

There were three Negroes and thirty-nine white patients treated for this condition in the seven year period, an incidence in the Negro of 9.2 per cent. Comparing this with the general population ratio (5:20) of Negro to white in this community, there is a lowered incidence of perforation in the Negro race for which we have no ready explanation. Of the forty-two patients three were female, again an incidence of 9.2 per cent. All of the women were white, two of whom were admitted in a moribund state and never came to operation.

PREDOMINANT SYMPTOMS AND SIGNS

Of the patients admitted, the predominant symptom was that of pain, sudden in onset and epigastric in location in all but two. Vomiting occurred but rarely. The presence of shoulder pain has been recorded so infrequently that the incidence of this symptom cannot be evaluated. The predominant finding was tenderness and muscle spasm, most frequent in the upper abdomen but quite often generalized. This finding occurred in all cases. In 4.7 per cent the symptoms were referable to the right lower quadrant and in these patients a provisional diagnosis of appendicitis was made, the patients being explored for this condition. It is to be noted that in these patients there was no tenderness or spasm of the epigastrium and there was a negative history of previous ulcer symptoms. In none were the symptoms referable to the left lower quadrant. In one patient there was an associated history of long standing gallbladder disease and the presenting signs and symptoms were those of acute cholecystitis. This patient was treated conservatively for five days and when operated upon was discovered to have a minute pinpoint gastric perforation which had sealed off spontaneously. One patient had had previous gastrostomy with subsequent esophageal dilatations later followed by closure, because of esophageal stricture resulting from the swallowing of lye. There was one patient who had auricular fibrillation complicating his treatment and postoperative care. Still another presented a diagnostic problem in that he was a narcotic addict with some withdrawal symptoms at the time of admission.

SHOCK

Although patients with acute gastroduodenal perforation are said frequently to have shock, this has not been a predominant finding among our cases. Four of the forty-two patients, a percentage of 9.2, had symptoms of mild shock as exhibited by moderately depressed blood pressure, elevated pulse rate and sweating. In these, administration of preoperate parenteral fluids (5 per cent glucose in distilled water or normal saline) was sufficient to correct the fluid volume adequately for operation. Two patients exhibited symptoms of profound shock, one of whom expired, never having regained consciousness enough to allow operation. This patient had had gastroenterostomy seven years prior to his perforation and the ulcer was found at post mortem examination to be of a marginal type. The other patient with severe shock remained in the hospital fifteen days postoperatively and departed healed. In preoperative preparation of this case, three 500 cc. whole blood transfusions were necessary to correct the shock syndrome.

Hours	6	6-12	12-18	18-24	24+	Unknown
Total Potients	12	10	4	4	8	4
Shock	2	1	1	0	0	0
Wound Infection	0	0	2	0	1	1
Deaths—						
Surg.	0	1	1	1	1	0
Non-Surg.	0	0	0	1	3	0

Fig. 3. Relationship of duration of acute symptoms in hours to shock, wound infection and surgical and non-surgical deaths.

DURATION OF SYMPTOMS PRIOR TO OPERATION (FIGURE 3)

There were twelve patients operated upon with the duration of symptoms being less than six hours. Of these, two were in shock; there were no deaths. In the second six hour period there were ten patients. Of the ten, one patient was in mild shock, and there was one fatality among the rest. At laparotomy this patient was noted to have a perforation measuring 3 cm. across, and massive peritoneal contamination. He expired after having been in the hospital less than one day. In the third six hour period there were four patients, of whom one had moderate shock at the time of admission. This patient expired on his fourth postoperative day from massive collapse of the left lung and represented the only death in this group. In the fourth six hour period, there were four patients and one death, which occurred on the 22nd postoperative day, from pulmonary embolism. There were eight remaining patients whose duration of symptoms prior to operation ranged from more than twenty-four hours to nine days. Of these patients, none was in shock at the time of admission, and there was one fatality. This finding is in direct contrast with reports from other authors and clinics wherein the highest mortality rates have been from the groups in which the duration of perforation prior to surgery was more than twenty-four hours.

LOCATION OF ULCER

There were eighteen cases of gastric perforation, a percentage of 42.8. Of these, sixteen were in the distal third of the stomach and two were in the middle third. There were ten cases, or 23.8 per cent, of duodenal perforation, the perforation having occurred in the first portion of the duodenum. Of the remaining fourteen cases, thirteen, or 30.9 per cent of the whole, were stated by the operator to have been in the region of the pylorus, with edema surrounding the site of perforation to such an extent that definite localization was not possible. The other case was one in which previous partial resection with gastroenterostomy had been performed, the ulcer being of the marginal type. All perforations were anterior, into the greater peritoneal cavity, a finding in accord with other authors, perforations into the lesser cavity being quite rare.

ANESTHESIA

In the last two and one-half years, spinal anesthesia has been the anesthesia of choice, using 16 to 17½ mg. of pontocaine in 3½ cc. of spinal fluid and glucose. However, a variety of anesthesias has been used, all with excellent results. In addition to spinal anesthesia, open drop ether, ethylene-ether-oxygen, cyclopropane and sodium pentothal have been employed. We have had no fatalities which could be classified as anesthetic deaths.

TREATMENT

Although seven different surgeons performed the forty-two operations, the policy of treatment has remained constant within the hospital. That is, all patients once having had a diagnosis established of perforated ulcer were treated by immediate instigation of gastric suction and given parenteral fluids with other supportive measures as indicated. All patients were subjected to operation immediately upon establishment of diagnosis or as soon as the general condition of the patient would permit. In all patients but two the perforations were closed, using interrupted fine catgut reinforced with interrupted silk and with a small tab of omentum sutured in place over the perforation. Two were close with interrupted fine silk. The various chemotherapeutic and antibiotic agents have been employed postoperatively as they have been developed and released for general use. Since July 1, 1946, early ambulation has been urged upon every patient.

MORTALITY

Of the series of forty-two patients, there were eight fatalities, a gross over all mortality of 19 per cent. However, thirty-eight of the forty-two were subjected to surgery, among which number there were four postoperative deaths, giving an operative mortality rate of 10.5 per cent. To recapitulate, one patient expired of pulmonary embolism on his 22nd postoperative day. A second expired on his fourth postoperative day of massive collapse of the left lung. A third also expired on his fourth postoperative day and was found at autopsy to have generalized peritonitis. The fourth expired sixteen hours following operation, having had massive contamination of the peritoneum at time of exploration. In the last three years of the period covered by this report there have been eighteen cases subjected to surgery, with no deaths in the operative group, giving an operative mortality for the three-year period of 0 per cent. In the non-operative group, there are four cases recorded who expired shortly after admission. Two of these patients were women, aged fifty and fifty-three years, giving respectively a seven and three year history of duration of ulcer symptoms prior to perforation.

One was accompanied by a two day history of acute symptoms, the other by a seven day history and, although neither was in shock at the time of admission, both expired within twelve hours after entering the hospital. Both were housewives. The other two patients were white males, aged forty-two and forty-seven years, both in profound shock on admission, having had a three day and twenty-four hour history of acute symptoms. An estimated total time of duration of symptoms was not obtained in either case. One had had gastroenterostomy with previous partial resection of the stomach and had massive peritoneal contamination from a perforating marginal ulcer. In the other case the location of the ulcer was duodenal, anterior in the first portion.

POSTOPERATIVE STAY IN HOSPITAL

The over all average stay in the hospital was sixteen and one-half days per case. However, in the four and one-half years prior to July 1, 1943, the average length of stay per patient was twenty-three and one-half days. Since July 1, 1946, the average length of patient's stay has been nine days. It is of note that since July of 1946 early ambulation has been practiced extensively. The postoperative morbidity for operative cases as defined by temperature elevation above 100 degrees F. has been 3.2 days' average. Of the twenty-two patients subjected to surgery prior to July 1, 1946, the average morbidity was 4.8 days. Of the sixteen patients subjected to surgery since July 1, 1946, there has been an average morbidity of 1.09 days of the postoperative period. Of the thirty-eight patients treated by surgery, there were four in whom wound infection developed, an incidence of 10.5 per cent. Two of these patients had wound separation. There were no deaths among those patients having wound infections. Two of the four had had a duration of symptoms of less than eighteen hours, the other two having a time of thirty hours and a five-day history of duration of symptoms with massive peritoneal contamination in each. There have been no incidences of wound infection or dehiscence in the past three years.

The majority of the operative patients over the entire period have been followed by subsequent x-ray examinations since July 1, 1946. Of these, eight have been proved by x-ray examination to have had a recurrence of their ulcer. One patient, five years after his initial perforation, was subjected to vagotomy for relief of intractable ulcer pain. No patients other than this one have come to upper gostrointestinal tract surgery in this hospital. We have had no incidences of reperforation while in the hospital although there was one case in which postoperative obstruction developed due to adhesions, necessitating a second laparotomy for enterolysis. There was one incidence of postoperative thrombophlebitis, this occurring in the left lower leg but without embolic phenomena.

CONCLUSIONS

1. Acute gastroduodenal perforation is a disease of any age, but most frequent during middle age.

2. The disease may have a lessened morbidity and mortality, provided the patient is given the benefit of early diagnosis and surgical treatment.

3. The mortality rate among those patients whose condition will merit surgery has been lowered greatly through better preoperative care and the intensive use of the relatively new chemotherapeutic and antibiotic drugs.

SUMMARY

A report of forty-two consecutive cases of perforated gastroduodenal ulcer as demonstrated by operative or autopsy findings has been presented. Thirty-eight of the patients are reported as operative cases, and an exceptional operative mortality rate over the last three year period is shown. Various information pertinent to the cases, as a group and as individuals, has been presented.

REFERENCES

1. Jamieson, R. A.: Perforated Peptic Ulcer, Brit. M. J. 3:289-291, 1947.
2. DeBakey, M.: Acute Perforated Gastroduodenal Ulceration, Surgery, 8:882-884, 1940.
3. Barber, R. F., & Madden, J. L.: Acute Gastroduodenal Perforation, Am. J. Surg., LIX, 3, 484-495, 1943.
4. Baritell, A. LaM.: Surgery, 21:24-33, 1947.
5. McElhinney, W. T., & Holzer, C. E.: Surg., Gynec. & Obst., 87:85-92, 1948.

TRICHINOSIS—A PREVENTABLE DISEASE

Preventive medicine in modern times has touched nearly every field of medical practice and has practically eliminated many diseases which at one time were horrible scourges . . . One disease which has not in the least been affected by preventive measures, however, at least in our own country, is trichinosis. According to Gould, this state of stand-still has existed for at least fifty years.

The number of cases of trichinosis reported per year in the United States is approximately 300, although this is only a very small percentage of the actual number of cases since most of the cases are either undiagnosed or clinically unrecognizable. Actually, the number of cases is in the millions, for routine autopsies show an incidence of from 10 to 36 per cent in the general population.—David F. Leach, M. D., and Harold B. Ashworth, M. D. (Moundsville), in Ohio State Med. J.

TRAUMATIC RUPTURE OF THE MEMBRANOUS URETHRA*

By MORRIS H. O'DELL, M. D.**
Charleston, West Virginia

The purpose of this paper is to stress early diagnosis and early treatment of rupture of the membranous urethra.

Rupture of the urethra may occur with or without rupture of the bladder. The bladder is more likely to rupture if it is full at the time of injury and if a blow occurs directly over it. Rupture of the bladder may be extraperitoneal or intraperitoneal; the latter usually presents the appearance of shock combined with peritonitis.

Rupture of the urethra is always extraperitoneal. The cases discussed in this paper are those of rupture of the membranous urethra, none being combined with intraperitoneal bladder rupture. Rupture of the urethra usually occurs in the bulbous or membranous part, that of the latter site being the more serious. The bulbous urethra is ruptured by falls astride sharp nonyielding objects, occasionally from faulty instrumentation, and sometimes from self-inflicted injuries.

The membranous urethra is more easily ruptured than any other part of the urethra, and injury in this portion requires immediate surgery.

Wear states: "When associated structures are injured, their care has precedence after bladder drainage. Late urethral repair means increased morbidity and difficult surgery."

Rupture of the membranous urethra usually is associated with a fracture of the pubis and ischial arches. Lateral compression supposedly causes rupture by direct trauma from a bone fragment. Anteroposterior compression may cause separation of the symphysis with resultant stretching and tearing of the urethra. Bone fragments from anteroposterior compression may penetrate the bladder as well as the urethra. In either type of injury there is considerable soft tissue damage. The pudendal vessels often are torn along with the posterior layer of the triangular ligament when the membraneous urethra is torn, causing extensive hemorrhage into the prevesical space.

The patient on admission probably will be in some degree of shock. Complaints are chiefly of lower abdominal pain and tenderness. He may be able to void a small amount of bloody urine or, more likely, he may not be able to void at all. Blood usually is seen at the end of the penis. Fracture of the pubic bones may be palpated if there is any displacement. The bladder may be palpated as a separate mass if the urethral tear is complete. Rectal examination shows upward displacement of the prostate and the rectum may be slightly compressed by a soft bulging mass in the pelvis; if present, this indicates that the prostate gland and bladder have been torn loose and displaced upward. Swelling and discoloration of the perineum usually occur too late in membraneous rupture to be of any diagnostic importance, and are very apt to become profuse as time goes by. When the two layers of the urogenital diaphragm are torn, blood and urine pass freely into the perineal tissues, the periprostatic space, and upward to the prevesical space.

For diagnostic purposes, a catheter may be gently passed. If this is done roughly or forcibly, an incomplete rupture may be converted into a complete one. No irrigation should be done except for a sufficient amount of normal saline or distilled water to loosen any clots that may get into the catheter. The catheter may pass into the prevesical space and cause the return of bloody urine; therefore, getting bloody fluid or bloody urine does not mean that the catheter is in the bladder. X-ray examination of the abdomen, including the pelvis, will give information as to the type of fracture or separation of the symphysis, and whether or not a catheter previously inserted is in the normal course of the urethra. It may show the outline of a full bladder. Cystoscopic examination is contraindicated. A urethrogram should be done early, and is part of our routine in any suspected urethral tear as it is the only sure method of determining a ruptured urethra. An excretory urogram is not always appropriate at the time because the patient may be in shock and no dye will be excreted. A systolic blood pressure of about 85 mm. Hg. is the approximate level below which excretion of dye will not occur. An excretory urogram including a lateral film of the bladder should be done after the patient is out of shock as it will give information regarding the status of the kidneys, ureters, and bladder. The cystogram in a complete rupture of the urethra usually will show a distorted, high lying bladder.

Rupture of the membranous urethra should be repaired by a suprapubic incision with establishment of two way drainage. That is, a suprapubic mushroom catheter is placed in the bladder, and a Foley, or similar catheter, in the urethra. If the tear is complete and widely separated, some urologists attempt to suture the torn ends over the urethral catheter. I believe the majority of urologists do not attempt any approximation of the torn ends, preferring that the new urethra

*From the Department of Urology, Charleston General Hospital, Charleston.
**Surgical Resident, Charleston General Hospital.

form around the catheter. The patient should be closely observed for the next several months. Repeated dilatations may be necessary to prevent scar contracture. If not dilated, a tough, hard stricture not amenable to treatment occurs. The urethral catheter may be removed in approximately ten to fourteen days, or as indicated in the particular case. (Reynolds uses an inflated Foley catheter to pull the bladder back down into place, attaching the catheter to the leg with slight traction. A suprapubic catheter is not used. The catheter is removed and cleaned weekly, being left out at the end of three weeks. The patient is not allowed to void until then.) When the catheter is finally to be left out, a urethrogram should be repeated; if there is any extravasation of dye, the catheter is replaced. When one is certain that the urethra has healed, the suprapubic catheter is removed. Calibration and gentle dilatation should be done about twice weekly at the beginning, and continued as indicated for months or even years. It is at the time of withdrawal of the urethral catheter that acute pyelonephritis or renal infection is more apt to occur. Needless to say, frequent urine examinations and cultures are necessary throughout the treatment as it is very difficult to keep the urine clean with a catheter in place; an impending infection may be discovered early and treated.

Delayed treatment increases morbidity and mortality. If treated within twelve hours, the mortality usually is below 20 per cent. After twelve hours it rapidly jumps to 85 or 90 per cent. Reynolds reports a mortality of 13.8 per cent in 29 cases of traumatic rupture of the urethra. Culver reports a 22 per cent mortality in 18 patients with fracture of the pelvis and rupture of the urethra. Most other clinics report a higher mortality.

A review of the cases of ruptured urethra from the files of the Charleston General Hospital shows 22 patients sustaining traumatic rupture of the membranous urethra in the last twelve years with three deaths occurring in the series, giving a mortality of 13.6 per cent. An analysis of the three fatal cases shows that the primary rule of immediate surgery was not carried out in two. One patient, a 50 year old miner, injured in a slate fall, showed partial rupture of the urethra on urethrogram. A catheter was passed and left in place. Operation was delayed ten days, and at the end of that time the partial rupture had sloughed and had become complete. The operative field was literally a mess; the bladder was never located. Associated injuries were a fractured pelvis and a fractured tibia. The patient died of sepsis on the eleventh hospital day. The second death was that of a 49 year old miner injured in a slate fall. There was a complete membranous tear. Urethrogram was not made. Operation was delayed for thirteen days. Associated injuries were a fractured pelvis and a fractured trochanter and sacrum. The patient died of a massive perineal abscess and an overwhelming infection on the thirty-ninth hospital day. At one time, near death, 600 cc. of pus was drained from his buttocks. The third patient, a 46 year old miner, was injured in a slate fall which spread his legs wide apart. X-rays did not reveal a fracture of the pelvis, but showed separation of the symphysis. A diagnosis of incomplete rupture of the urethra was made. A combined suprapubic and perineal operation was done with insertion of a suprapubic and urethral catheter. A periurethral abscess developed and the patient died on the twenty-ninth hospital day, of a cardiac and pulmonary embolism. The remainder of the patients had operation or drainage within a few hours of admission and all lived. Diagnosis of a ruptured urethra was made in practically every case at the initial examination by the intern. Eleven cases had diagnostic urethrograms; practically all of these cases were admitted within the last five years.

During the beginning years of the series it was almost routine to make a suprapubic and perineal repair; five patients had this type of repair, with insertion of suprapubic and urethral catheters. Twelve patients had suprapubic repair, with insertion of suprapubic and urethral catheters in eleven patients, and in one patient a bladder catheter only. This patient, a 57 year old miner, was discharged after forty-eight hospital days. Three cases of partial rupture in which a catheter only was placed, were discharged after a slightly lower number of hospital days than the average. Only five of the twenty-two cases had incomplete rupture of the urethra and surgery was done in two of these. In counting hospital days, it must be remembered that nearly all had numerous fractures of the pelvis; and often fractures of other bones, which necessarily prolonged the hospital stay.

As to type of injury, four were hit by a mine car or rolled between the car and part of the mine; six were caught in slate falls; seven injuries resulted from automobile accidents; one was an impalement injury, and one occurred to a steel mill worker when a steel rack fell on his pelvis. Age is interesting; all but two of the mine accidents occurred to men over forty-five years of age, while the majority of the automobile accidents involved persons between fifteen and twenty years of age.

The twenty year old patient who sustained an impalement injury was sitting on a tall stool when the seat broke and one of the sharp ends entered the rectum and posterior urethra. He had an emergency urethral repair with colostomy and went home in twenty-two days. He returned a few months later for closure of the colostomy.

What kind of complications developed? Three patients died: two from overwhelming infection of the perineal region, and the third from cardiac and pulmonary emboli following a periurethral abscess. A persistent urethral fistula developed in two; both cases had had immediate surgery, one a suprapubic repair and the other suprapubic and perineal repair. A perineal swelling that subsided without incision and drainage in one case, bronchopneumonia in one case, and catarrhal jaundice in one case. Osteomyelitis of the pubic bone at the symphysis developed in one case and since then the patient has had many hospital admissions. One patient was in another hospital for seventeen days with acute stricture. In one case stones in the pelvis of the kidney and pyelonephritis developed following stricture. All patients, of course, had to be closely followed by dilatations to prevent stricture. None of the orthopedic complications is considered here.

The mortality rate probably will continue to drop in the future. All three of the deaths occurred before 1941. Of these, two might have been prevented if treatment by antibiotics had been available. This suggests that in the future if patients with traumatic rupture of the urethra undergo immediate surgery and have proper drainage, the mortality rate from the urologic viewpoint may drop to approximately 5 per cent. The patient without fracture or separation of the symphysis pubis, who yet received a rupture of the urethra is unusual in that I have found no similar case in the literature.

One of the arduous tasks confronting the urologist is to convince the patient that he must return frequently as directed for dilatations to prevent stricture and other complications. When a patient is doing well, he sees no reason for prophylaxis until suddenly he finds that cystitis has developed, or he finds it difficult to urinate; then he is ready to follow treatment, which by now has prolonged his disability and impaired his chances for better healing.

SUMMARY

Twenty-two patients were treated for rupture of the membranous urethra, five being incomplete and seventeen complete, with a mortality rate of 13.6 per cent. Two patients died of sepsis following delayed surgery, and the third died of an embolism. Ten cases have been treated since 1941 without a death. When a patient is seen with a possible ruptured urethra from pelvic injury, he should be treated for shock, and at the same time catheterized. If unable to catheterize, or if the urine is bloody, do a urethrogram at once. X-ray the abdomen and the pelvis to determine the extent of bone injury. As soon as the shock is over, do an excretory urogram. Drainage must be established early by immediate repair if a ruptured urethra is found.

Note:—I wish to express my thanks to Dr. G. G. Irwin for his assistance in the writing of this paper, as well as for the use of his cases from the hospital files.—M. H. O.

REFERENCES

Wear, John: Injuries of the Genito-Urinary Tract, J. Urol. (Aug.) 1948.

Harrison, J. Hartwell: The Treatment of Rupture of the Urethra, Especially when Accompanying Fractures of the Pelvic Bones, Surg., Gynec., & Obst. (March) 1941.

Leadbetter, W. F.: Repair of Complete Tear of the Membranous Urethra, J. Urol. (Dec.) 1945.

Butt: Traumatic Injuries of the Urinary System, Fla. Med. Ass'n., (Jan.) 1948.

Reynolds, C. J.: The Diagnosis and a New Treatment of Traumatic Rupture of the Posterior Urethra. South. M. J. (Sept.) 1942.

BIRTH OF PSYCHOSOMATIC MEDICINE

We owe to the genius of Freud the elucidation of the unconscious and the understanding of normal personality growth and development which was to lead psychiatry increasingly back into the field of general medicine. For out of these insights came an understanding of how human beings behave in health, in sickness, and in convalescence, of how the personality is inextricably woven into the cause and course of all disease processes, whether infectious, chemical, or metabolic, and of how specific emotions such as anxiety, fear, anger, resentment, hostility, and inner conflicts contribute to the wide range of pathological processes that fall into the domain of every physician.

Out of this was born—I might better say aborted—the field of psychosomatic medicine, with its many false promises, but with its essentially health emphasis upon the point of view and the method of attack.

Springing almost too facilely into being, the point of view seems here to stay in spite of its, as yet, unfulfilled promises, and its many empirical observation. Thus, in a sense, the cycle of medical growth has been completed and we are back where we started 2,000 years ago with Aristotle, in the recognition that everything man experiences and does is legitimately the area and responsibility of science, hence medicine.—**Thos. A. Rennie, M. D., in Trans. and Studies, Coll. Physicians, Phila.**

THE COUNTY HEALTH DEPARTMENT AND THE PRACTICING PHYSICIAN

(With Special Reference to Monongalia County, West Virginia)*

By MILTON I. ROEMER, M. D., M. P. H.**
Morgantown, West Virginia

Public health services in Monongalia County, West Virginia have a history older than the state itself. A study of the official records of the County Court, the Morgantown Common Council and other sources reveals some official government activity designed to prevent disease at least as far back as 1838. The earliest measures here, as in most counties, involved supervision of the disposal of refuse and vaccination against smallpox. The County Department of Health, as now constituted, was set up in 1929.

Throughout this entire twenty year period there has been a continually broadening scope of preventive activities. In one respect, official responsibilities of the appointed health officials have narrowed: in the nineteenth century, the part-time city and county health officers were given responsibility for medical care of the indigent, while in more recent years this has been assigned to the state and county welfare agencies. Preventive activities, however, have substantially broadened in response to two principal factors: increased knowledge of the prevention of disease and heightened public demand. In a democracy, public agencies naturally respond to the demands of citizens.

This broadening scope of public health activity has not been without strains in the relationships between health departments and practicing physicians. Evidence of such strains is plainly shown by a study of this health department's records over the past twenty years. Almost every public health official throughout the nation can testify to similar experience. Strains of this type are understandable. Medical practice is and has to be a stern discipline. It is small wonder that physicians often fear and oppose encroachment of government on the domain of their hard won skills. Yet, on examination, most of the strains prove to be due to misunderstanding. Physicians often contend that health departments attempt wrongfully to engage in the practice of medicine, a prerogative reserved by law and tradition for the private medical profession. The central principle of public health, however, has not been the diagnosis and treatment of disease. Rather, it has been the prevention of disease and the promotion of health by doing on a group basis what cannot be effectively done on a purely individual basis.

At each new stage of development of public health, misunderstandings between health agencies and private physicians have been eventually resolved. In the end, it has again and again been demonstrated that physicians have not suffered from the innovation, but have benefitted. Controversy has been waged in the past, for example, over the pasteurization of milk, the hospitalization of the tuberculous in public institutions, smallpox vaccination by health officials, the operation of well baby clinics, school health inspections by physicians or nurses, venereal disease control programs, and a dozen other organized community efforts to control disease. Around each of these programs brickbats have been thrown in both directions and the cry of "socialized medicine" has been raised.

Yet today all of these health programs and many others are generally accepted as a proper sphere for public action. And in each instance the health of the people has been advanced while the practicing physician has moved on to broader horizons of service. If the physician is less occupied today in the treatment of diphtheria, typhoid fever, late syphilis, or advanced tuberculosis, he is more occupied in the management of allergies, heart disease, or diabetes, the surgical and radiologic attack on cancer, or the challenging spheres of psychosomatic medicine and rehabilitation. Today there are new areas of discussion and controversy about the bailiwick of public health.

Viewed from the vantage point of the practicing physician, a major share of health department functions today involves cooperative relationship between the health agency and the medical profession. From one point of view, the health department provides what is essentially an auxiliary service to the practicing physician. Much of this service supports the physician through education of his patients; other services render the physician direct technical assistance in the diagnosis or treatment of disease. It may help to foster good faith between health departments and physicians if we review some of these fields of public health service as they are carried out in the current program in Monongalia County.

1. To assist the physician in the diagnosis of numerous diseases of public health significance, laboratory tests are done free of charge by the State Hygienic Laboratory, a section of the West Virginia State Department of Health. In addition to the thousands of serologic tests for

*Based upon an address by the author before the Monongalia County Medical Society, at Morgantown, W. Va., December 7, 1948.

**Director Monongalia County Health Department and West Virginia Public Health Training Center (Surgeon, USPHS), February, 1948, to May, 1949.

syphilis done for physicians every month, these laboratory services include diphtheria cultures, blood agglutination tests for various febrile diseases, spinal fluid examinations, bacteriologic and parasitologic examinations of stool specimens, sputum examinations and cultures for tubercle bacilli, and other tests. To simplify the physician's access to these services, the local health department provides convenient laboratory specimen containers for the asking.

2. Various biologicals and drugs are provided physicians for the prevention of disease in indigent or medically indigent persons. These include such items as smallpox vaccine points, diphtheria and tetanus toxoid, pertussis vaccine, triple typhoid vaccine and measles immune globulin. Silver nitrate ampoules for the newborn infant's eyes are given to physicians doing home deliveries. Certain preparations for the treatment of disease are also offered, such as diphtheria antitoxin and arsenicals and bismuth for antiluetic therapy. When penicillin was difficult to obtain, it was provided physicians treating cases of syphilis and gonorrhea, although it is now preferred that patients unable to afford the cost of this drug be referred directly to public VD clinics.

3. Health education is a major function of the health department staff, but there is no education so effective as that received in the office of a family doctor. To facilitate this, the health department furnishes the physician a variety of literature for distribution to his patients. This includes pamphlets for prenatal patients, for patients with venereal disease or tuberculosis, pamphlets on child care, nutrition, home nursing, and a dozen other subjects. A series of excellent leaflets on child guidance and mental hygiene is automatically mailed by the state department of health to all parents of first-born infants in the state; the submission of a birth certificate is the signal for this service.

4. Assistance to the physician in the management of cases of acute communicable disease is one of the classical services of public health agencies. Public health nurses visit the patient's home to instruct the family in the details of isolation, quarantine, and the care of the sick one, usually a child. The availability of this service depends, of course, on the diligence of the physician in reporting cases of communicable disease as is required by law. Some physicians fail to report cases because they object to a nurse's visit to the home of one of their private patients, but in our experience I do not know of a single case in which the family has not welcomed such a visit (and this includes visits in cases reported by a neighbor or the family itself, rather than the attending doctor). On orders from the physician, public health nurses often are able to assist in the follow-up of cases and contacts in the home. In isolated rural families unable to reach the doctor's office, such nursing assistance can save the physician much travelling time.

5. The tuberculosis control program helps the physician in many ways. General case-finding through chest x-ray surveys yields new cases which are referred to private physicians for management. In addition, the health department will make a chest x-ray examination on patients referred by a physician, sending the report to him. When cases of tuberculosis are reported by physicians, nurses visit the home and make certain that all contacts receive x-ray examinations either through the health department or privately; in this way new patients may be brought to medical attention. The entire public health program in this field brings patients with tuberculosis to the doctor's attention at an earlier stage of the disease, when the patient and his family can be better assured of recovery.

6. The venereal disease control program is about the only sphere in which public health agencies engage in treatment as well as prevention or case-finding; treatment of these patients is essential to halt spread of the disease. Despite public clinics for the complete management of venereal disease, it can be shown easily that the volume of VD cases under the care of private physicians has vastly increased since public health agencies have worked actively in this field.

In 1941, I made a study of the volume of cases of syphilis being treated by private physicians in three communities of comparable population, economic level and social conditions, located within about 50 miles of each other in a northeastern state. Two of the towns had active venereal disease clinics operated by health departments, while the third had no such program. A good index of the volume of cases under care was available through the practice in this state health department of providing physicians with arsenicals and bismuth for the treatment of any case reported, whether indigent or not; the accuracy of reporting, therefore, was comparable in all three communities. It was found that the average syphilis case load per private physician in the communities with the active clinics was almost twice the average private case load in the community without a clinic. While this may seem surprising, it is only what is to be expected from the epidemiologic services emanating from

a venereal disease clinic. For each infectious case found in a VD clinic, and for some old non-infectious cases, the health department staff will find one or two or three other cases. Many of the new cases—either contacts or the source of the initial case—will seek their treatment from private physicians. Where clinics are active, moreover, general case-finding is promoted through public education, mass serologic surveys, routine blood tests in industry or other places, and similar measures. Many if not most of the cases detected through these methods reach private medical attention, especially in prosperous economic times like the present. The services of a venereal disease investigator are available also to interview private patients in an effort to find contacts or sources. Finally, those physicians who do not care to treat venereal disease may, of course, refer their patients to the health department.

7. The infant and child hygiene program of the health department operates, somewhat like the VD program, to increase rather than decrease the volume of private practice. Through general education and nursing visits to the home, regular periodic medical attention by family doctors is encouraged for all infants and children. The nurse visiting a home does not give medical advice on the care of any illness she may find, but she will advise the mother on the general hygienic care of the infant, how to bathe and diaper him properly, how to prepare and store the formula, the importance of orange juice and cod liver oil (or comparable sources of vitamins), proper habits of sleeping, eating and playing for the baby, and similar matters of health maintenance.

Although many families may be able to finance the services of a doctor for their children when made imperative by acute sickness, a periodic check-up by a private physician seems to be a luxury beyond their means. For these families, the well child conferences of the health department are available. At these sessions, preventive health advice and immunizations are given, but sick children are not treated. If an illness or physical defect is found, the family is referred to a private physician.

8. Maternal hygiene has as one of its chief objectives the promotion of systematic prenatal and postpartum care of all pregnant women. The vast bulk of such care is rendered by private physicians, and public prenatal clinics are designed to help those who do not seek private care. Motherhood classes are conducted by the health department to instruct expectant women on the hygiene of pregnancy, answering many questions that would otherwise take the doctor's time. The health department gives instruction to midwives, designed, among other things, to stress the importance of calling a physician if any abnormalities are evident.

9. The school health program of the health department brings to medical attention many children whose health needs would otherwise remain neglected. Inspections by nurses in the schools detect many physical and mental defects, and the parents are advised to take the child to a physician for diagnosis and treatment; visits may be made to the home to induce families to follow this advice. When the family is unable to afford private attention, the child may be referred to the health department's "school diagnostic clinic." Necessary treatment, however, must be given by a private physician, and the health department will often contact various voluntary agencies which provide funds for financing such care.

10. Even health department work in environmental sanitation has its relationship to private practice. In cases in which disease is due to sanitary deficiencies, the health department investigates problems in the patient's home, advising on water supply, sewage disposal, insect or rodent control, or even carbon monoxide poisoning. Health department policies in restaurant sanitation, moreover, yield a large number of patients to practicing physicians each year through the requirement of medical examinations for new food handlers. Turnover in this type of work is so high that in Monongalia County between 300 and 500 such examinations are performed by private physicians each year.

11. Cancer control is one of the newer phases of public health and in this field relationships with private physicians are especially great. The general health education program aims to bring patients to physicians at the onset of the earliest possible symptoms of cancer. The cancer detection clinic operated by the health department cooperatively with the medical society and the American Cancer Society offers a screening examination on individuals past 40 years of age with or without symptoms. If any case of cancer is found, the patient is referred to a private physician for care. It is the general experience of such clinics, moreover, that for every malignancy discovered there are ten or more noncancerous conditions found, and all these cases are referred to private physicians.

Far from "stealing patients", such cancer clinics yield a great many patients who might otherwise have not sought medical attention. Moreover, the very operation of a clinic, and the general pub-

licity surrounding it, tend to make the entire community more cancer conscious, more likely to see its doctors for systematic check-ups. For patients in whose cases a definite diagnosis of cancer has been made and who are unable to finance treatment, the state department of health provides funds to pay surgical and hospital bills; the local health department assists in submitting applications for such aid.

12. A final service of the health department for the medical profession in Monongalia County is in the field of professional education. The health officer and a public health nurse give courses of instruction to student nurses at both the general hospitals in the county, courses otherwise taking the time of busy practioners. Instruction is given also to students at the University of tion is given also to students at West Virginia University Medical School and the School of Social Work.

The same basic principles as are illustrated in this dozen classes of health service govern other public health programs under consideration for this county and other counties in the state. A program of mental hygiene, for example, would help to provide psychiatric and auxiliary service for patients, especially children, referred by private physicians. A program of diabetes control would help to detect unrecognized cases of diabetes, referring such patients to private physicians for management. In virtually every public health activity the health department tends to complement rather than replace the private practitioner.

In answer to the basic question, therefore: "Is the health department practicing medicine and taking patients away from private doctors?" the answer must be: "No, the health department is performing an educational, preventive, and administrative job which ultimately increases the opportunities for service in private practice and strengthens the hand of the private medical practitioner."

In some counties, it is true that medical health officers render direct clinical service in various programs but, in my opinion, this is not desirable. It is often made necessary by a sheer shortage of private practitioners to render part time service in the public health clinics. In Monongalia County, all clinics are attended by private physicians who generously give their time for relatively small hourly fees. The health officer confines his work entirely to administrative and organizational functions, the kind of work that most busy practitioners are glad to be spared.

Public health as a medical specialty has begun to come of age. Training of modern health officers today involves the same type of postgraduate study and training that is demanded in the various clinical specialties. Yet, those of us who specialize in public health medicine do not pretend to know all the answers, even in the field of our specialization. Advice from public spirited physicians is always valuable and gratefully appreciated. The general movement for the extension of preventive health services in this nation is far deeper and broader than is adequately reflected by the outlines of the public health program in a single West Virginia county. It is a movement in which private practitioners must always have a key role. By participation in this effort, the private physician will earn the increasing esteem of the men and women in an ever more health conscious public.

A GOOD INSECTICIDE, NOT A POISON

A statement was recently issued by the Department of Agriculture and the Federal Security Agency calling attention to the proved value of DDT as an insecticide. Some public alarm has been caused by misleading comments concerning possible hazards connected with the use of this chemical.

It is pointed out that DDT has contributed materially to the welfare of the world, and should not be brought into disrepute through overemphasis of the well recognized fact that it has toxic properties, especially if improperly used. The ingestion of a tube of toothpaste, or a cake of soap or a bottle of cleaning fluid might be injurious or fatal, and yet they are harmless and useful substances if properly employed.

The fact that DDT, like other insecticides, is a poison, has been given full consideration in the formulation of recommendations for its use: "There is no evidence that the use of DDT in accordance with the recommendations of the various Federal agencies has ever caused human sickness due to the DDT itself . . . despite the fact that thousands of tons have been used annually for the past four or five years, in the home and for crop and animal protection."

As a precautionary measure modifications of recommendations have recently been made by the Department of Agriculture for the use of DDT on dairy cattle. There is, however, no justification for any public alarm about the safety of the milk supply from the standpoint of possible DDT contamination.—New England Journal of Medicine.

LEUKEMIA

Leukemia was first recognized as a disease entity in 1845. Principal credit belongs to Virchow for differentiating it from other conditions in which there is an increase of white cells in the blood. The disease is common; since 1940 there have been recorded an average of 5000 deaths per year. In 1942 there were more deaths from leukemia than from meningococcic meningitis, small pox, poliomyelitis, scarlet fever, diphtheria, typhoid fever, and malaria combined.—Jerome L. Weinstock, M. D., in Clinical Proceedings of the Jewish Hospital, Philadelphia.

TUBERCULOSIS ABSTRACTS*

THE EFFICIENCY OF GAUZE MASKS

Although there is no certain knowledge as to the size of the infectious particles concerned in the origin of human inhalation tuberculosis, there is considerable evidence to suggest that these are much smaller than the limits of ordinary visibility. Primary pulmonary tuberculosis in man takes root not in the upper respiratory passages but deep in the lung parenchyma, usually beneath the pleura. The effective pathogenic units must be assumed, therefore, to be smaller than the lumina of the terminal bronchioles. That the tubercle-bacilli-containing-particles responsible for naturally acquired air-borne pulmonary tuberculosis in rabbits are of microscopic dimensions is indicated by the fact that ultraviolet irradiation of the air of a room contaminated by tubercle bacilli protected rabbits from an air-borne contagion that caused progressive tuberculosis in 73 per cent of animals of the same genetic resistance similarly exposed in an unirradiated room. The ventilation of the irradiated room was such that some of the droplet nuclei of tubercle bacilli floating in the air were exposed to irradiation for only one second before inhalation by the exposed rabbits.

Therefore, it was not certain whether gauze masks with pores of relatively large magnitude, such as may be worn by individuals exposed to air-borne contagion of human tuberculosis, would filter out the dangerous invisible droplet nuclei of tubercle bacilli. There is evidence that six layer gauze masks, especially after repeated washing, will remove bacteria floating in the air without interfering with respiration.

Miss Esta H. McNett, of the Veterans Administration, designed a six-layered gauze mask to be worn by nurses engaged in the care of tuberculous patients. The efficiency of these masks was studied in an apparatus for quantitative air-borne infection modelled after the one described by Wells. The protective action of the gauze masks developed by Miss McNett was tested against the quantitative inhalation of droplet nuclei of tubercle bacilli which regularly induce pulmonary tuberculosis in rabbits.

The essential feature of the instrument was a nebulizer which generated droplet nuclei of tubercle bacilli. Most of these nuclei contained isolated bacilli; only occasionally were minute clumps, not larger in diameter than a red blood cell, liberated into the air. This infected air was drawn into an exposure chamber, into which the heads of the rabbits to be exposed protruded through a close-fitting collar. The infected air circulated past the noses of the rabbits and was removed through an exhaust pipe.

Three and six-layer gauze masks, 40 by 44 threads to the square inch, were sewn to fit the contour of the rabbit's head, neck and ears. The gauze in front of the rabbit's nose and mouth had no seams.

Rabbits without masks and rabbits wearing masks were exposed simultaneously in the inhalation of air containing droplet nuclei of virulent bovine tubercle bacilli of the Ravenel stain.

It was found that, if all the air respired by rabbits exposed to the inhalation of droplet nuclei of virulent bovine tubercle bacilli passes through three or six-layer gauze masks, there is a 90 to 95 per cent reduction in the incidence of primary pulmonary tuberculous foci which develop within five weeks. It would follow that, if the respired air contains but a few bacilli, the masked animal will usually be protected from an otherwise fatal infection. Twelve of 20 masked animals were completely protected against air-borne contagion of such intensity that from 29 to 1,027 tubercle bacilli units were deposited in the lungs of simultaneously exposed unmasked rabbits.

Measurements of the thread diameters and inter-thread spaces of these masks by H. Shapiro showed that the superimposition of three to six layers of this material would occlude practically all of the spaces and in this way explain the results of the experiments.

One must be extremely guarded in applying these data to the protection of human beings. With the rabbits all of the respired air passed through the masks. To be equally effective for human beings exposed to air-borne infection of tuberculosis, masks must be worn in an ekually effective manner. The masks protected rabbits from air populated with droplet nuclei of tubercle bacilli to a degree that would rarely, if ever, be found in the air respired by human beings. Human primary tuberculosis usually originates as a single pulmonary focus ,whereas the unmasked rabbits in these experiments developed an average of 51 primary tubercles. Nevertheless, it seems reasonable to advise persons wearing masks to refrain from deep inspiration which may diminish the filtering efficiency of the masks.

Conversely, masks worn by coughing patients can hardly be expected to retain the invisble droplet nuclei containing tubercle bacilli propelled through them during fits of coughing.—The efficiency of Gauze Masks, Max B. Lurie, M. D., and Samuel Abramson, V. M. D., American Review of Tuberculosis, January, 1949.

POTENTIALS OF INDUSTRIAL MEDICINE

Industrial medicine has a great and unique opportunity in having a cross section of the all-age adult population over long periods of time under constant care and observation. A potential cross-section of 60 million, containing every degree of good health as well as every degree of sickness and disability.

It is my belief that coordinated industrial medical reporting in this nation of the information that parades every day and hour through the factory hospital doors is capable of creating a veritable barometer of national health that can become as reliable and useful as the meteorological data and forecasts of our weather bureau.—W. J. Fulton, M. D., in Industrial Medicine.

*Issued monthly by the National Tuberculosis Association and furnished through the courtesy of The West Virginia Tuberculosis and Health Assaciation.

The President's Page

The need for post graduate education in our state becomes increasingly greater each day as scientific medicine makes more rapid progress.

The need is especially great in our rural and mining areas where there is a definite lack of physicians and any form of relief is almost impossible to obtain. It is very difficult, therefore, for physicians in these areas to take post graduate or refresher courses provided at schools in distant cities.

It is unfortunate that our state does not have a well established center for post graduate education where these physicians could take a refresher course without being away from work for more than a few hours at a time.

Over the years, we have failed to develop a center, and one of the reasons is because it has been the custom of many of our county societies to bring in out-of-state men for their monthly meetings. This tendency has led to our failure to develop the talents of many of our own physicians, who are just as capable in knowledge and experience to present a subject as many of the so-called experts whom we bring in as guest speakers.

The world knows little about the vast practical experience that has been gained by many of the physicians of our state. This knowledge should be passed on through our "Journal" and by the presentation of papers before our county societies.

It should not be difficult for several of the larger medical centers in our state to develop excellent post graduate courses. Hospitals in the Huntington, Charleston and Wheeling areas that are recognized for the training of residents in the various specialties could be used as a nucleus for any plan so formulated.

In addition to post graduate instruction at our medical centers, we should have groups go out into the rural and mining areas for panel discussions of modern medicine.

Certainly, we have too long hidden our light beneath a bushel basket. We have the knowledge and the facilities. A well informed physician means better medical care. We can and must provide for better post graduate education in our state.

THOMAS G. REED,
President.

Thomas G. Reed.
President.

West Virginia Medical Journal

Official Journal of
The West Virginia State Medical Association
302 Atlas Building, Charleston, West Virginia

Editor

Walter E. Vest, M. D. (1951) ..... Huntington

Managing Editor

Mr. Charles Lively ..... Charleston

Associate Editors

W. M. Sheppe, M. D. (1949) ..... Wheeling
Edward J. Van Liere, M. D. (1950) ..... Morgantown
G. G. Irwin, M. D. (1952) ..... Charleston
R. H. Edwards, M. D. (1953) ..... Welch

Editor Emeritus

James R. Bloss, M. D. ..... Huntington

Business Manager

Mr. Charles Lively ..... Charleston

Published monthly on the first day of the month, at Charleston, by The West Virginia State Medical Association.

Original articles are accepted on condition that they are contributed exclusively to the Journal.

Advertising rates furnished upon request. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the American Medical Association.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston 24, West Virginia. Telephone, Capitol 34-625.

ONE LAST WORD

This is one last word concerning the annual meeting at The Greenbrier, scheduled to get under way Thursday morning, August 4.

We realize that it is literally impossible for all of the members of the State Medical Association to attend the meeting. However, we believe that every doctor should try to be present. There are still rooms available at hotels in White Sulphur Springs and nearby cities, and many lovely tourist homes in the vicinity offer deluxe accommodations.

The scientific program speaks for itself. Comment is unnecessary, but we cannot refrain from using this opportunity to suggest for the last time that every member study it carefully. With the talent provided by the program committee, every doctor might well ask himself "How can I afford not to be present?"

We return to The Greenbrier after nine long years, assured of a hearty welcome and with full knowledge that nothing has been left undone to make our stay there both pleasant and profitable.

ASYMPTOMATIC CARDIAC INFARCTION

Since Herrick presented his classic description of coronary occlusion in 1912, the attention of the profession has been directed to severe pain as the outstanding symptom of cardiac infarction. However, as time has gone by, gradually it has become understood that large cardiac infarcts may occur entirely without pain.

In 1932, N. S. Davis III suggested that infarction without pain might result from previous ischemia and fibrosis of the heart muscle. Severe dyspnea, with or without myocardial failure, has been noted often in these cases without pain. A little more than a decade ago, Bean reported a series of 1,287 cases of infarction of the myocardium, 28 per cent of which did not suffer pain.

In his excellent book, "Coronary Artery Disease," just published, Boas says that "myocardial infarction is unaccompanied by pain in at most 5-10 per cent of cases," but he lists other symptoms coming on at the time of the infarction as "dyspnea, nausea and vomiting, vertigo, collapse and fainting." He also lists syncope without pain, especially in the older age group, severe shock, bradycardia, abnormal ventricular rhythms, and acute pulmonary edema as symptoms at times accompanying painless infarction.

LaPlace, in his classic presentation on myocardial infarction in the aged before the recent meeting of the American Geriatrics Society, stressed particularly sudden mental aberrations, especially delirium and acute psychoses, as symptoms of painless myocardial infarctions in the aged, and suggested that such a symptom complex indicated search for cardiovascular as well as cerebrovascular accidents.

In the current issue of Archives of Internal Medicine, Landman, Anhalt and Angrist discuss myocardial infarction without any of the symptoms usually believed to accompany acute infarction of the heart muscle. They analyzed all autopsies performed at Queens General Hospital from January, 1944, to March, 1948, and found 255 cases of proven myocardial infarction. Of this number 28, or 11 per cent, had no history of pain, shock, dyspnea, or congestive failure. Four of these cases showed single fresh infarcts, 11 multiple fresh and old infarcts, and 13 old infarcts only. There were no significant differences between the symptomatic and asymptomatic groups when they were considered as to age, sex, race and cardiac size. The authors do call attention to the necessity of suspecting myocardial infarction in the case of aged persons who suffer sudden cerebral insufficiency with or without shock, and LaPlace, in the paper already referred to made the statement that 60 per cent of

all infarctions in persons over 70 years of age show psychotic manifestations.

In the light of the statistics presented by Landman and his co-workers, our ideas of the diagnosis of myocardial infarction may have to be revamped somewhat, and these authors suggest also that our treatment, especially anticoagulant therapy, should be re-evaluated.

STATE C. OF C. CONTINUES FIGHT

The West Virginia Chamber of Commerce is continuing its fight against compulsory health insurance. A copy of the pamphlet, "Compulsory v. Voluntary Health Insurance," was enclosed with Bulletin No. 190, dated July 9, mailed to each member in the state.

The Bulletin itself has this to say concerning socialized medicine:

"Compulsory v. voluntary health insurance is the subject of an enclosed leaflet in which 50 pertinent questions are posed and authoritatively answered. All the questions grow out of the proposal of the Federal Government to effectually "socialize" the practice of medicine and the handling of U. S. health problems.

"The leaflet is produced by the AMERICAN MEDICAL ASSOCIATION, a fact which immediately raises this question: Why has the AMERICAN MEDICAL ASSOCIATION been recognized for more than 100 years as the final authority on U. S. medical and health problems, yet is now harried, castigated, and bemeaned by extremely vocal and often irresponsible elements in and out of the Government, merely because an overwhelming majority of America's 180,000 doctors, who comprise the AMA membership, are registering their opposition to a *compulsory* health insurance program in the United States?

"This sudden and general assault on such a respected group of outstanding American citizens is at least faintly reminiscent of the attacks made some 16 years ago upon the Army, the President, the Congress and on the American form of government, when thousands of tramps (who never worked before or since), and a minority of misguided veterans were "used" by a "core" of Communists (according to a report of the BROOKINGS Institution) in the so-called "BONUS MARCH" on Washington.

"At the risk of over-burdening our members with required reading, we suggest careful perusal of the enclosed leaflet, also an article, "IS YOUR HEALTH INSURED?", appearing in the June 18 issue of the SATURDAY EVENING POST. The latter is a fully documented statement of the immense recent gains made by *voluntary* health insurance programs.

"The Chamber has for *free distribution* a number of copies of the "EWING" report, titled "THE NATION'S HEALTH," which completely describes the government's program. Members who may be in doubt about the ultimate objectives of certain Federal officeholders, are urged to secure and examine this first-hand evidence."

GENERAL NEWS

ALL IN READINESS FOR ANNUAL MEETING AT WHITE SULPHUR SPRINGS

Next Thursday, August 4, it is expected that between five and six hundred members of the State Medical Association and Auxiliary will be at White Sulphur Springs for the 82nd annual meeting, the first to be held there since 1940.

There has been no change in the scientific program which appeared in the July issue of the Journal. Several meetings of sections and affiliated societies have been arranged for afternoons during the meeting, and a list of such meetings is included in a condensed copy of the scientific program which has been mailed to all members of the Association.

Rooms Still Available

As this issue of the Journal goes to press (July 20), reservations at The Greenbrier are nearing the 550 limit set by the management. Several doctors have already engaged rooms at other hotels in White Sulphur Springs and Lewisburg, and some are staying at nearby attractive tourist homes.

While the program committee has arranged a set schedule for the morning of each day of the meeting, afternoons and evenings are more or less open so that doctors may attend any of the many important section or society meetings scheduled, or play golf, tennis or swim, or engage in other recreational activities provided at The Greenbrier.

Entertainment

The members of the Woman's Auxiliary will be in charge of entertainment arranged for every afternoon during the meeting. In addition, they will provide bingo and other forms of entertainment each evening. Suitable prizes will be awarded.

Several doctors have entered the golf and tennis tournaments. Play will be limited to afternoons, and trophies will be presented the winners at the annual banquet Saturday evening, August 6.

House of Delegates

One change has been made in the time of the second meeting of the House of Delegates. The first session on Thursday, August 4, is scheduled for four o'clock, but the second session on Friday has been moved up to 3:45 o'clock to provide time for the appearance of the guest speaker, Dr. Ralph J. Gampbell, formerly of Manchester, England, who will discuss briefly, "Medicine in England Today." Doctor Gampbell's appearance before the House of Delegates has been arranged through the courtesy of the American Medical Association and the firm of Whitaker and Baxter, which has charge of the National Education Campaign.

Woman's Auxiliary

Plans have been made by the Auxiliary for meetings which will be held conjointly with the State Medical Association. A large attendance is assured, as nearly 150 auxiliary members had reserved accommodations

at The Greenbrier as of the middle of July. Mrs. David B. Allman, president of the Woman's Auxiliary to the American Medical Association, will be the guest speaker at the luncheon Saturday at noon.

Dr. Durant Banquet Speaker

The meeting will close Saturday evening with the annual banquet at which Dr. Will Durant, eminent and well known philosopher, lecturer, and author, will be the guest speaker. His subject will be, "What Are the Lessons of History."

DR. R. B. BAILEY CHAIRMAN OF NEW BOARD

The new state board of health has elected a prominent Wheeling surgeon as its first chairman. Dr. Russell B. Bailey, who was unanimously named to head the new board, will serve for a term of two years, beginning July 1, 1949.

At the organization meeting, which was held in Charleston, Dr. Newman H. Dyer, state health commissioner since September 3, 1947, was unanimously elected director of health.

Under the program outlined by Doctor Dyer, 22 local health units are planned for the 55 counties in West Virginia, each to be headed by a fulltime health officer.

The board approved the salary scale for public health personnel for the new biennium, and adjourned to meet again on September 7.

Doctor Bailey has long been interested in public health work in West Virginia. He is a member of the council of the State Medical Association, president of the West Virginia Cancer Society, and a director of the American Cancer Society.

KANAWHA-CHARLESTON HEALTH UNIT EXPANDS

Dr. R. Moore Doddrill, formerly of Welch, who has been serving as a resident in internal medicine at the C. & O. Hospital in Huntington, has accepted appointment as deputy health director for the Kanawha-Charleston health department. Dr. Leon A. Dickerson is the director.

Doctor Doddrill received his M. D. degree in 1944 from the University of Cincinnati, and interned at Mercy Hospital, Chicago, 1944-1945. He served as a captain in the Medical Corps of the Army during World War II, and was assigned to duty overseas. He was licensed in West Virginia in 1947.

SCIENTIFIC EXHIBIT AT INTERIM SESSION

Application blanks for space in the scientific exhibit at the interim meeting of the AMA in Washington, D. C., December 6-9, 1949, are being distributed by the committee on scientific exhibit.

The meeting is intended primarily for physicians in general practice, and will consist of clinical presentations accompanied by exhibits of practical interest. The scientific exhibit will include many exhibits with active demonstrations.

Application blanks may be obtained from the Director, Scientific Exhibit, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

OVER 100 HOSPITALS, CLINICS AND NURSING HOMES LICENSED 1948-49

At the end of the first year of operation under the new hospital licensing law, 86 hospitals in West Virginia have been approved and are operating under licenses granted by the state health department. Of this number, 69 are general hospitals, nine EENT, four orthopedic, two tuberculosis, one maternity, and one chronic disease hospital.

In addition to the hospitals, licenses have been granted to five clinics and 22 nursing homes.

According to a list compiled by Dr. N. H. Dyer, state director of health, the following hospitals and related institutions were licensed as of June 30, 1949:

General

Beckley Hospital	Beckley
Bluefield Sanitarium	Bluefield
Boiarsky Memorial Hospital	Charleston
Buckhannon Hospital	Buckhannon
Camden-Clark Memorial Hospital	Parkersburg
Charles Town General Hospital	Charles Town
Charleston General Hospital	Charleston
Chesapeake & Ohio Hospital	Huntington
City Hospital	Martinsburg
Davis Memorial Hospital	Elkins
DePue Hospital	Spencer
Dunn Hospital	South Charleston
Fairmont General Hospital	Fairmont
Gassaway Hospital	Gassaway
Gordon Memorial Hospital	Spencer
Grace Hospital	Welch
Grafton City Hospital	Grafton
Greenbrier Valley Hospital	Ronceverte
Guthrie Hospital	Huntington
Heiskell Memorial Hospital	Morgantown
Hinton Hospital	Hinton
Holden Hospital	Holden
Huntington Memorial Hospital	Huntington
Kanawha Valley Hospital	Charleston
Kings Daughters Hospital	Martinsburg
Laird Memorial Hospital	Montgomery
Logan General Hospital	Logan
Madison General Hospital	Madison
Matewan Clinic	Matewan
McClung Hospital	Richwood
McMillan Hospital	Charleston
Memorial General Hospital	Elkins
Mercer Memorial Hospital	Princeton
Mercy Hospital	Logan
Monongalia General Hospital	Morgantown
Morgan County War Memorial Hospital	Berkeley Springs
Mountain State Memorial Hospital	Charleston
Myers Clinic Hospital	Philippi
Oak Hill Hospital	Oak Hill
Ohio Valley General Hospital	Wheeling
Pocahontas County Soldiers & Sailors Mem. Hosp.	Marlinton
Potomac Valley Hospital	Keyser
Point Clinic & Hospital	Point Pleasant
Raleigh General Hospital	Beckley
Ravenswood Hospital	Ravenswood
Reynolds Memorial Hospital	Glendale
Rife-Ferguson Hospital	Kenova
Rowley Clinic Hospital	Huntington
Salvation Army Hospital	Charleston
Sacred Heart Hospital	Richwood
St. Francis Hospital	Charleston
St. Joseph's Hospital	Buckhannon
St. Joseph's Hospital	Parkersburg
St. Luke's Hospital	Bluefield
St. Mary's Hospital	Clarksburg
St. Mary's Hospital	Huntington
Sistersville General Hospital	Sistersville
Staats Hospital	Charleston
Stevens Clinic Hospital	Welch
Sutton General Hospital	Sutton
Taylor Hospital	Mullens
Herbert J. Thomas Memorial Hospital	South Charleston
Tucker County Hospital	Parsons
Union Protestant Hospital	Clarksburg
Weir-Cove Osteopathic Hospital	Weirton
Weston City Hospital	Weston
Wetzel County Hospital	New Martinsville
Wheeling Hospital	Wheeling
Williamson Memorial Hospital	Williamson

EENT

O. H. Bobbitt Hospital	Charleston
Chambers Eye, Ear, Nose & Throat Hospital	Beckley
Ferrell Eye, Ear, and Throat Clinic	Lewisburg
Hartman Eye, Ear, Nose & Throat Clinic	Parkersburg

Holcombe Eye, Ear, Nose & Throat Hospital	Charleston
Lance Eye, Ear, Nose & Throat Hospital	Charleston
Seletz Eye, Ear, Nose & Throat Hospital	Charleston
Shepherd Hospital	Charleston
Wellsburg Eye & Ear Hospital	Wellsburg

Orthopedic

Huntington Orthopedic Hospital	Huntington
Huntington Orthopedic Hospital Division	Huntington
Marmet Hospital	Marmet
Morris Memorial Hospital	Milton

Tuberculosis

Hillcrest Sanitarium	Charleston
Ohio County Tuberculosis Sanitarium	Triadelphia

Maternity

Lewisburg Maternity Hospital	Lewisburg

Chronic Disease

Peterson Chronic Division	Wheeling

Clinics

Coffindaffer Memorial Clinic	Shinnston
Grace Clinic	Chelyan
Wheeling Clinic Diagnostic Hospital	Wheeling
Veach's Clinic	Petersburg
Mason Clinic	Mason

Nursing Homes

Alcan Center, Inc.	Charleston
Marguerite L. Cokeley Nursing Home	Harrisville
Combs Convalescent Home	South Charleston
Convalescent Center	Charleston
Florence Crittenton Home	Wheeling
Easton Convalescent Home for Children	Morgantown
Fairview Nursing Home	South Charleston
Fifth Avenue Nursing Home	Huntington
Gist Nursing Home	Sistersville
Goff's Rest Home	St. Albans
Harrell Nursing Home	Charleston
Hurd's Nursing Home	Ronceverte
Kelley Nursing Home	Parkersburg
Mace Memorial Nursing Home	St. Albans
Marshall Convalescent Rest	Vienna
Meadows Nursing Home	Rock Cave
Nella's Rest Home	Parsons
Ohio County Home & Farm	Triadelphia
Riverlawn Nursing Home	South Charleston
Stone Crest Nursing Home	Huntington
Turner's Nursing Home	Ceredo
West Virginia Masonic Home	Parkersburg

CANCER SOCIETY NAMES EXECUTIVE DIRECTOR

The executive committee of the West Virginia Cancer Society has named Mr. James W. Harris, of Charleston, as executive director, a new office created at the annual meeting last spring. Most of his work for the present will be in the field and will consist of setting up and perfecting county organizations and services.

Mr. Harris is a native of Wheeling. He is a graduate of West Virginia University, and served as secretary to Governor H. G. Kump. For the past several years he has served as regional director of the National Foundation for Infantile Paralysis, of which Joe Savage is executive director. His work has taken him into Pennsylvania, Virginia and North Carolina. Just prior to World War II, he served as medical director for the department of public assistance, with headquarters in Charleston.

Mrs. John Speed Harvey, of Huntington, will continue as State Commander of the Field Army.

STATE DOCTORS HONORED BY AMA

The following honorary members of the West Virginia State Medical Association were elected to Associate Fellowship in the American Medical Association at the annual meeting of the House of Delegates in Atlantic City, June 9:

Everett R. Cooper, Troy; Wylie H. Cunningham, Beckley; H. E. Gaynor, Parkersburg; Harrington C. Martin, East Rainelle; Thomas W. Moore, Huntington; John E. Offner, Fairmont; C. R. Ogden, Clarksburg; and Joseph C. Peck, Moundsville.

CHARLESTON HOSPITALS FIRST TO QUALIFY FOR HILL-BURTON FUNDS

The day before the allocation of $1,555,000.00 to West Virginia under the Hill-Burton act would have reverted to the federal government for lack of matching funds, the Herbert J. Thomas Memorial Hospital, in South Charleston, and the new Charleston Memorial Hospital met the requirements for making use of this fund. Had funds not been available on July 1, the entire allottment would have been lost to this state.

Notwithstanding the efforts that have been made by the state health department and affiliated agencies to obtain hospital construction for communities in the higher priority groups before the deadline on July 1, only the two Charleston hospitals were successful in matching the federal offer on a $1 for $2 basis. The sum of $1,522,281.00 was released by the state and federal governments to match the $3,044,562.00 raised by the Charleston Memorial Hospital Association for the construction of the first unit (129 beds) of the new hospital.

The sum of $32,000.00 was released to the Herbert J. Thomas Memorial Hospital to be used in the construction of a nurse's home and the renovation of the top floor of the hospital to provide for twenty-eight additional beds.

The 1948 and 1949 allocations under the Hill-Burton act, amounting to a little over three million dollars, have been received by the state department of health, and are available, upon a priority basis, to communities in West Virginia meeting requirements.

AM. CONG. PHYSICAL MEDICINE IN CINCINNATI

The 27th annual scientific and clinical session of the American Congress of Physical Medicine will be held at the Netherland Plaza hotel at Cincinnati, September 6-10. All sessions will be open to members of the medical profession in good standing with the American Medical Association.

Annual instruction courses will be given September 6-9, and will be offered in two groups. One set of ten lectures will consist of basic subjects, and attendance will be limited to physicians. Another set of lectures will be more general in character and will be open to physical therapy technicians, as well as physicians.

Full information concerning the meeting may be obtained by writing to the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

INTERNATIONAL COLLEGE OF SURGEONS TO MEET

The 14th annual assembly of the International College of Surgeons will be held in Atlantic City, November 7-12, 1949. The program will include scientific sessions on subjects in the fields of general surgery; EENT surgery; gynecology and obstetrics; urology; and orthopedic, thoracic, plastic and neurological surgery.

Over 500 surgeons will be received as Associates and Fellows at the Convention. Full information concerning the program may be obtained from Arnold S. Jackson, M. D., secretary, Jackson Clinic, Madison 4, Wisconsin.

TWO-THIRDS OF DOCTORS IN STATE ALREADY REGISTERED UNDER NEW LAW

West Virginia doctors are cooperating to the fullest extent with the state health department in the matter of registration under the new biennial registration act, which became effective July 1.

Blank cards were mailed to every doctor known to be practicing in West Virginia. By July 18, more than 1200 doctors had returned the cards with the biennial registration fee of two dollars.

August 31 Deadline

Blank application cards for registration under the new biennial registration law have been mailed to every doctor in West Virginia whose address is known to the State Department of Health or the State Medical Association.

If any doctor has not received his card, a duplicate will be mailed upon request addressed to the State Health Department, The Capitol, Charleston.

It should be definitely known by the latter part of August just how many physicians are practicing in West Virginia, who they are, and where they are located. This information has never before been available. The address of each of the fourteen hundred members of the State Medical Association is known, but there has heretofore been no current record of the address of doctors who are not members.

West Virginia is the thirty-second state to require the annual or biennial registration of doctors. The District of Columbia and Hawaii also require such registration.

NEW FILM TO BE SHOWN AT THE GREENBRIER

The new AMA Becton & Dickinson film, "They Also Serve," which portrays the doctor's responsibility in the event of major disaster, will have its eastern states' premiere at the annual meeting of the West Virginia State Medical Association at White Sulphur Springs, August. 5.

This film, which had its world premiere at the American Medical Association convention at Atlantic City, and which runs for seventeen minutes, will be shown by Dr. Harold C. Leuth in connection with his address, which is scheduled for Thursday evening, at 8:45 o'clock. He will discuss "Medical Care in the Atomic Age."

This new sound picture will soon be available to the medical profession throughout the country for use before county and state societies and lay groups.

NEW REGISTRAR OF VITAL STATISTICS

The new state board of health has appointed Mr. Hi Eastland Steele as state registrar of vital statistics. For the past several years he has been serving as director of the division of vital statistics of the state health department.

The new law provides that the state registrar be a qualified statistician. Prior to June 1, 1949, only a physician was eligible for the post.

All local registrars will be appointed by the new state registrar with the advice and consent of the state director of health.

AMERICAN ACADEMY OF NEUROLOGY

At the first national scientific meeting of the American Academy of Neurology, held at French Lick Springs, Indiana, officers were elected as follows: President, Dr. A. B. Baker; vice president, Dr. Pearce Bailey; and secretary-treasurer, Dr. Joe R. Brown.

The Academy, which is a relatively young organization, now has over 700 members. Doctors interested in becoming members should write to Dr. Joe R. Brown, secretary, Mayo Clinic, Rochester, Minnesota.

MATERNAL DEATHS CONTINUE LOW TREND

Diseases of the heart continue as the leading cause of death in West Virginia, and the first five months in 1949 showed an increase over the same period in 1948. Deaths for that period in 1949 totaled 1,952 as against 1,801 last year.

The same trend is true of cancer, the second leading cause of death in the state, with 761 deaths reported this year against 753 in 1948.

Infant and maternal deaths decreased for the first five months over the same period in 1948, the rate being 40.2 per 1,000 live births as compared with 45.7 in 1948. There were twenty maternal deaths this year and twenty-six during the same period last year. The state health department has emphasized the fact that maternal deaths in 1948 were the lowest ever recorded in West Virginia, and there is every indication that there will be a new low record at the end of 1949.

Deaths from all causes took the same trend as infant and maternal deaths, with 6,950 being reported through May this year against 7,301 for the same period in 1948.

DR. JENNINGS ELECTED FELLOW BY ACCP

Dr. Thornton S. Jennings, of Martinsburg, was accepted as a fellow in the American College of Chest Physicians at the Convocation held at the Ambassador Hotel in Atlantic City, June 4. Dr. George R. Maxwell, of Morgantown, is West Virginia Governor of the College.

DR. PAUL D. WHITE ON FALL HEART PROGRAM

Dr. Paul D. White, of Boston, one of the Country's best known and most successful cardiologists, will be the guest speaker at the annual fall meeting of the West Virginia Heart Association. He will speak on September 29 before an open meeting at the Charleston High School auditorium. His subject will be, "Questions and Answers in Heart Disease."

The scientific session in the form of a clinic will be held Friday afternoon, September 30, at the Daniel Boone Hotel, and will be followed by a business meeting and a dinner for physicians and non-physician members of the Association.

MLB TO MEET OCT. 3-5

The fall meeting of the new West Virginia Medical Licensing Board will be held at the Capitol, in Charleston, October 3-5, for the purpose of examining applicants for license to practice medicine in West Virginia.

At the first meeting of the new board, held July 7, fifteen doctors were licensed by reciprocity, and thirty-one appeared for the written examination.

OBSERVANCE OF STATE CANCER CONTROL PROGRAM EMPHASIZED BY DOCTOR DYER

The need for the observance of the regulations governing the treatment of needy cancer patients under the cancer control program of the state health department was emphasized in a recent release by Dr. N. H. Dyer, state health director. The original directive issued by the Division of Cancer Control is as follows:

"It is necessary that two things be known to the division of cancer control in order to determine whether a patient may receive treatment at state expense:

"1. There must be evidence which gives rise to a diagnosis of cancer, and

"2. There must be evidence that the patient is unable to pay for his own care.

"Two forms have been prepared to facilitate the obtaining of information to cover these two points, viz:

"1. Application for Care, Form CA-1. This form includes various questions designed to give the necessary financial information. All questions must be answered, and the form must be signed by the applicant and by the referring agency.

"The application form must be filled out by the municipal, county or district health officer or the public health nurse of the County Health Department. Application for care may also be made at the county offices of the department of public assistance or at cancer information centers in cities where they have been established.

"2. Medical Report of Cancer Case, Form CA-2. This form is to be filled out by the patient's physician. The division of cancer control is unable to pay the physician's fee for filling out form CA-2. The individual or family will have to assume responsibility for payment to the family physician for this service.

"Both of the forms should be sent directly to the division of cancer control, 1719 Washington Street, E., Charleston, since no disposition of a case can be made until both types of information have been received.

"The Division will notify the patient whether the application can be accepted, and will advise the patient where to report for further attention."

Doctor Dyer has made it clear that treatment is extended to a patient so long as the surgeon or radiologist believes it to be of value and so long as the prognosis is at least fairly good. Active treatment consists of surgery, radium, and deep x-ray therapy.

Through joint planning with the department of public assistance, patients who have reached the advanced stages of cancer and who meet the requirements of that department for eligibility, are referred to the DPA for terminal care.

DOCTOR VEST HEADS NEW LICENSING BOARD

Dr. Walter E. Vest, of Huntington, was elected president of the new West Virginia medical licensing board at its organization meeting, held July 7, in Charleston. He will serve for a term of two years. Doctor Vest has been a member of the public health council since 1933, and has served as its president since 1937. The new board succeeded to all the licensing duties of the PHC on July 1.

Another member of the new medical licensing board, Dr. W. P. Bittinger, of Summerlee, has served for several years as a member of the public health council.

FORMER WEST VIRGINIAN HONORED

A former West Virginian, Newell Stewart, was elected secretary of the Arizona Pharmaceutical Association at the annual meeting held at Phoenix, in June.

Mr. Stewart, who is mayor of Phoenix, and secretary of the state board of pharmacy, is a native of New Martinsville and a graduate of West Virginia University.

HEART DIAGNOSTIC CLINIC FOR INDIGENTS

A diagnostic clinic for indigents suffering from cardio-vascular diseases has been established in Charleston by the West Virginia Heart Association. The clinic meets each Tuesday at noon in the Kanawha-Charleston health department, and patients are seen by appointment, as diagnostic study is completed in one visit.

A similar clinic is operating in Wheeling under the auspices of the West Virginia Heart Association. Plans are under way to utilize equipment of the rheumatic fever project of the state health department in Fairmont to expand diagnostic services in northern West Virginia to all age groups. Another diagnostic clinic is also planned for Huntington.

NEW COMPENSATION MEDICAL DIRECTOR

Dr. James Leonard Vickers, of Greenwich, Connecticut, has been appointed by compensation commissioner Curtis B. Trent, Jr., as medical director of the Workmen's Compensation Fund. He succeeds Dr. William T. Henshaw, who died April 14, 1949.

Doctor Vickers, who is a native of Huntington, has been engaged in the practice of his specialty of surgery at Greenwich for the past several years. Previously he had been identified with the medical departments of the New York and Wisconsin workmen's compensation funds. He is a graduate of Johns Hopkins University School of Medicine, and is a fellow of the American College of Surgeons.

RELOCATIONS

Dr. D. C. Prickett, who has been located at Parkersburg for the past year, has moved to Lumberport, where he will be associated with Dr. James C. Repass in general practice.

* * * *

Dr. Paul C. Johnson, of Belle, has located at Penn Yan, New York, where he is associated in the practice of medicine with Dr. Ralph H. Davis, with offices at 8 Arcade Building.

* * * *

Dr. Eugene R. McNinch, of Hollidays Cove, has accepted a three-year residency in radiology at the University Hospital, in Baltimore, effective July 15, 1949.

* * * *

Dr. Philip W. Oden, of Oak Hill, has moved to Ronceverte, where he will continue the practice of his specialty of surgery.

* * * *

Dr. Joseph M. Straughn, of Omar, has moved to Amherstdale, where he will continue in industrial practice.

"Severe intractable asthma

requires more strenuous measures. . . . Aminophyllin in doses of 0.25 Gm. dissolved in 10 cc. of water is often very effective when injected intravenously."[1]

To relax spasm, relieve congestion and restore deep, regular breathing,

SEARLE **AMINOPHYLLIN***

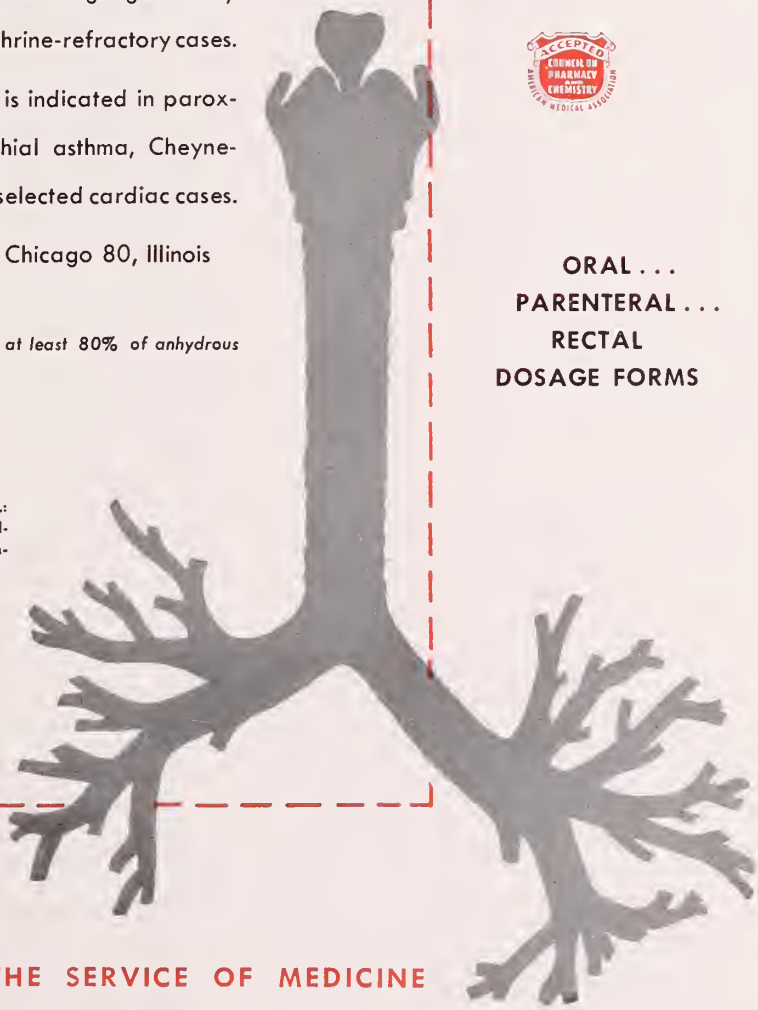
has proved a valuable drug—generally effective even in epinephrine-refractory cases.

Searle Aminophyllin is indicated in paroxysmal dyspnea, bronchial asthma, Cheyne-Stokes respiration and selected cardiac cases.

G. D. Searle & Co., Chicago 80, Illinois

*Searle Aminophyllin contains at least 80% of anhydrous theophylline.

1. Rackemann, F. M., in Cecil, R. L.: Textbook of Medicine, ed. 7, Philadelphia, W. B. Saunders Company, 1948, p. 539.



ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

ORAL . . .
PARENTERAL . . .
RECTAL
DOSAGE FORMS

SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

SALES TAX ON GLASSES AND FRAMES

The following is a copy of a bulletin recently released by the State Tax Commissioner, covering the collection of consumers' sales tax by optometrists, opticians and oculists on frames and glasses sold by them:

"Attention is again directed to Rules and Regulations issued by this office regarding the collection of Consumers' Sales and Service tax by optometrists, opticians and oculists on the sale of frames, glasses, goggles and other accessories sold by them. This bulletin was last issued on July 1, 1947, and, in our opinion, no change has been made in the law that would disturb this requirement.

"Apparently the impression has gotten around that a recent decision of the Supreme Court of Appeals exempts this class of business from responsibility of collecting the tax as set out in the regulation above mentioned, but the action of the Supreme Court recently in a criminal case originating in Roane County merely had the effect of refusing to disturb a decision of the circuit court in that district. This in no wise changes the statutory requirements of our law and the regulations issued to conform therewith.

"All administrative officers and employees of this office must require that this regulation be observed and optometrists, opticians and oculists are advised that it is their duty to collect consumers' sales tax as set out in the bulletin under date of July 1, 1947, a copy of which is attached hereto.

"Failure to so collect and remit the tax will subject you to the penalty as provided by law."

DOCTOR BUFORD NAMED TO NEW COUNCIL

Dr. Robert K. Buford, prominent Charleston surgeon and past president of the West Virginia State Medical Association, has been appointed a member of the newly created council of the Southeastern Surgical Congress. The appointment was made by the president, Dr. R. J. Wilkinson, of Huntington.

CONFERENCE OF SECRETARIES AND EDITORS

The annual conference of secretaries and editors, sponsored by the American Medical Association, will be held November 3-4, at the AMA headquarters in Chicago.

"A" GRADES v. APTITUDE

As I see it, our boards are laying too much stress on students with "A" grades in pre-medical work, and not enough on the aptitude of the individual. Far be it from me to take any credit away from "A" grade students, but so often this class, upon graduation, prefers science, chemistry, professorships or some highly scientific branch of medicine, rather than the practice of general medicine in rural communities, where the need is so urgent. The less skilled students in books, may actually make a finer doctor in practice than the magna cum laude graduates. The answers to these questions must be forthcoming—and soon.—Robt. B. Durham, M. D., in J. So. Carolina Med Assn.

SOMETHING FOR NOTHING

Now that it is possible to fly across half the world in three days there seems no reason why the well-to-do patient, advised of the necessity of an expensive and urgent operation, should not balance the price of the air ticket against the surgeon's fee, and, if the latter is the greater, come and have the job done here for nothing by someone equally experienced. Australian and New Zealand papers please copy.—The Lancet.

Annual Reports

COMMITTEE ON INDUSTRIAL HEALTH

The Committee on Industrial Health met at the State Medical Association offices in Charleston on April 27, 1949, to consider the activities during the past year and discuss activities and problems concerning industrial health in the future.

The first problem discussed was that of relief physicians for industrial areas. This problem arose the latter part of the year 1948 when numerous requests were presented to the Public Health Council from doctors in industrial areas, particularly the coal field areas, for physicians to relieve them. The Council referred this problem to the Committee on Industrial Health for approval of a plan whereby a pool of qualified physicians would be maintained from which relief doctors could be drawn.

It was suggested by the Public Health Council that a possible arrangement might be made whereby resident physicians in the hospitals could be placed in these areas for variable periods of time at a stipulated salary. This would serve the dual purpose of relieving the doctor who is now practicing in this area and allow a resident practical experience in the practice of medicine as recommended by the "grass roots" program of the American Medical Association.

The committee approved this tentative plan and presented it to the Council of the Association for its approval. After some discussion, it was approved and referred back to the Public Health Council, which requested that a joint committee of the Council and the PHC be appointed to work out the details. This committee has been at work and will present a plan to both the Public Health Council (now the Medical Licensing Board) and the Council of the Association in the near future.

The second activity of the committee was filling out a questionnaire from the Industrial Health Council of the A.M.A. concerning the relationship of the State Medical Association and its committees with the State Compensation Department. The Council of the A.M.A. is to correlate the relationship and it is expected that an article on the subject will be published in the near future.

The third problem discussed was concerning the Appeal Board of the State Compensation Department. It was called to the Committee's attention that, although about 90 per cent of the compensation cases appealed are based on medical testimony, there is no medical member on the Appeal Board. It was the opinion of the committee that , due to the fact that the Appeal Board has to deal with so many medical problems, it would be advisable to have a doctor of medicine as a member of the board.

The fourth problem discussed was the occupational disease clauses of the compensation law as passed at the last session of the legislature. It is the committee's desire that this portion of the compensation law be brought to the attention of the doctors of our state and that all physicians familiarize themselves with the law. The committee feels that, due to the pro-

visions of the law, our standards of medical fitness to work in industry will need to be revised. Better and more complete physical examinations will have to be made.

Increased protection of the worker in industrial plants should be insisted upon by the physician in charge for the protection of both the worker and industry. It will be necessary to provide periodic physical examinations at shorter intervals, especially in the occupations that are potentially disease hazards. This will result in greater protection for both labor and industry.

We believe that it will be necessary for many of the smaller industries which do not now have industrial medical departments to set up such departments in order that the law may be satisfactorily enforced.

Respectfully submitted,
J. L. PATTERSON, M. D.,
Chairman.
G. W. EASLEY, M. D.,
J. L. THOMPSON, M. D.
H. M. BROWN, M. D.,
C. W. STALLARD, M. D. ,
W. F. ROGERS, M. D.

* * * *

COMMITTEE ON MENTAL HYGIENE

The Committee on Mental Hygiene has held three meetings during the current year, the first on January 16, the second on May 8, and the third on July 10.

The chief objective of the committee has been the encouragement of the formation of local mental hygiene societies in various communities in the state with a view to effecting a larger organization to meet on a statewide level. This topic was discussed at length at the January meeting and it was agreed that the most effective way to proceed was to ask the state health officials and their assistants to serve as temporary chairmen in the different communities.

The committee's conception of such an organization is that its chief function would be the dissemination of information to the public generally on matters relating to mental health, making use of the various facilities including visual education, literature, press, radio and lecture. In keeping with this objective representatives of the committee met the assembly of state health officials and their staff members on January 24 and explained the objective to them. They received a favorable reception, and much interest in the proposed movement was expressed. Some progress has been made, but there still remains much to be done.

Although the committee was not directly concerned, its members noted with interest the great volume of publicity concerning the deficiencies of the state hospitals and schools for mental defectives which originated in the columns of the Charleston Gazette early in the year. As a result of this publicity, there was a widespread demand for more appropriations for the support of these institutions. It is felt that the only effective way to retain this public interest in mental hygiene is through the organization of lay groups in the different sections of the state.

Dr. J. L. Knapp, one of the original members of the committee, left the state when he resigned as superintendent of the Weston State Hospital to become affiliated with a private sanitarium in Dallas, Texas.

The committee has continued to act in an advisory capacity to the director of mental hygiene of the state health department in the organization of mental hygiene clinics. The following four clinics are operating as of this date:

Martinsburg, supplied by Dr. Joseph Rom, of Baltimore.

Institute, supplied by Dr. S. O. Johnson, of Lakin.

Charleston, supplied by Dr. W. B. Rossman and assistants.

Huntington, supplied by Dr. Charles G. Polan, of Huntington.

In each case, the psychiatrist is employed on a part-time basis. The clinic, however, is open each week day with full-time social workers and psychologists in charge.

The recent legislature amended the Code to eliminate the term "insane" and similar words, replacing the same with terms indicative of mental illness. The general term "mentally diseased" includes the three general groups, mentally ill, epileptic, and mentally deficient. Copies of the new law may be obtained from the West Virginia Board of Control.

It is the desire of the Mental Hygiene Committee to offer to the physicians of the state some type of refresher training in the field of psychosomatic medicine or the application of psychiatric principles in the practice of medicine involving patients whose illness is dependent to a marked degree upon emotional stress. All doctors see many such patients in their practice. Such patients present difficult problems of treatment.

Last year a seminar was held in Huntington, with a two day program made up of lectures or addresses by visiting specialists. The committee has given consideration as to whether a similar program should be recommended to the state health director and the director of mental hygiene clinics for the current year, or whether some substitute program might be more effective in reaching a larger number of doctors.

At its last meeting, the committee considered the plan of offering to send its representatives to various county society meetings on invitation of the societies for the purpose of giving clinical demonstrations with patients selected by doctors of the local groups. It was decided to address a circular letter to each of the component societies, seeking the reaction of the officers of the societies to this plan and their suggestions as to dates when such meetings might be planned. In the meantime, the question of the availability of funds for expenses will be given consideration by Doctor Dyer and Doctor Rossman.

Respectfully submitted,
EDWARD F. REASER, M. D.,
Chairman.
W. B. ROSSMAN, M. D.,
A. L. WANNER, M. D.,
N. H. DYER, M. D.,
E. L. GAGE, M. D.,
O. N. MORRISON, M. D.

* * * *

UMW ADVISORY COMMITTEE

The difficulties and risks in the administration of the UMW Welfare and Retirement Fund were dis-

cussed in detail by the members of this committee with UMW Area Medical Administrators at a meeting held May 4, 1949, in Charleston. Amicable settlement of most of the problems was reached by the two groups.

The committee was impressed with the desire of the Area Medical Administrators to give good medical care to authorized members of the Fund and to pay for such care on the basis of reasonable rates charged by the doctor. There is no set fee schedule, and there will be none unless the medical profession so desires, or unless charges are so out of line that the Administrators of the Fund feel that they must request that such a schedule be provided.

There will be a free choice of physician and hospital, and an effort will be made to handle most cases through the family doctor. It is the desire of the Administrators of the Fund to have the family doctor ask for a consultation whenever there is a question of diagnosis or extent of disability. In the past, those eligible for coverage by the Welfare and Retirement Fund and their beneficiaries have been taken care of under what might be termed "episode authority."

In the near future, however, every doctor in the West Virginia districts will receive a questionnaire to determine whether he is desirous of participating as a physician for the Fund. When the questionnaire is returned, forms will be forwarded to the doctor, instructing him concerning care of members.

Every eligible member of the UMW will have a card indicating his eligibility. Upon presenting the card to a physician who has agreed to participate, the physician will render such services as are necessary and bill the Fund for the same.

It was pointed out at the meeting of the two groups that in private practice most physicians lose approximately fifteen per cent on collections. While the Administrators of the Fund do not feel that a doctor should provide a lower fee schedule than is generally in effect in his area, they do feel that a more reasonable approach on the problem of fees would be extremely desirable, for a definite payment will be made in each instance. In other words, no loss will be incurred on the part of the physician.

As all of us realize, the problem of fees is basically one of the reasons for the present upsurge and sentiment for National Compulsory Health Insurance. The committee feels that a word of caution is all that is necessary in this particular instance. Neither the Fund nor its Administrators will make any attempt to select a doctor for any patient. The success or failure of this experiment depends entirely upon the general practitioner or family physician, and the whole program is predicated upon that conception.

Another problem discussed was that of eyeglasses. This seems to be a rather important problem because of the apparent number of individuals who may need spectacles. The committee agreed with the Fund Administrators that probably the sensible solution of the problem is the division of professional and material charges. Professional charges would be made by the doctor both for refraction and subsequently for fitting or adjustment, but the optical houses from which actual materials were purchased would bill the Fund for the glasses. This, it seemed to the members of the committee, is a reasonable approach.

For the present, dentistry will only be done in cases where the dental problem affects the general health of the patient, and the family doctor may call in the dentist for consultation and apply for authorization of necessary work. It is felt that the family physician would more likely know the dentists in the area best qualified to render service.

The forms for authorization of work and reports will be kept as short as possible, but accurate reports must be made for records.

Compensation cases will not be cared for by the Fund; however, if compensation funds are exhausted in an individual instance and the patient still needs further medical and hospital care, the Fund will authorize such care upon request of the physician.

It is hoped that hospital bills can be arranged upon a reimbursable cost basis in nonprofit institutions. In hospitals providing free services, such as Sisters in Catholic hospitals, salaries may be included for services and added to the costs. This method will make it much easier to compute hospital costs per day.

Cases of tuberculosis, cancer or venereal disease, detected at regular centers and otherwise not provided for, may apply to the Fund for medical care.

There are many details to be worked out which will take time. It is the request of your committee that the medical profession and hospitals give full cooperation and that any difference of opinion or misunderstanding be referred to your committee for adjustment.

We feel that probably the Welfare and Retirement Fund, in the final analysis, is the best answer found so far to combat National Compulsory Health Insurance and its attendant federal regulations.

The committee was impressed with the desire of the Administrators to require a minimum of paper work and we feel that if the medical profession in West Virginia will cooperate wholeheartedly there should be no difficulties that cannot be solved.

Respectfully submitted,

RAY M. BOBBITT, M. D.,
Chairman.
W. FRED RICHMOND, M. D.,
Secretary,
J. P. HELMICK, M. D.,
D. A. MacGREGOR, M. D.

EVILS OF COMPULSORY SICKNESS INSURANCE

Compulsory sickness insurance, notwithstanding misleading propaganda to the contrary, is a variety of socialized medicine or state medicine and possesses the evils inherent in any politically controlled system. It results in deterioration of medical care. This is the main reason why we, as a profession, oppose it.

We repeat the statement that state medicine is a forward step in the eventual socialization of the entire national economy. We, as a profession, are not alone in our championship of private enterprise, and we should and will have powerful backing from others who value freedom of enterprise rather than socialism.—Minnesota Medicine.

THE WEST VIRGINIA MEDICAL JOURNAL

302 ATLAS BUILDING, CHARLESTON, W. VA.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Editor
WALTER E. VEST, M. D.
955 Fourth Ave.
Huntington, W. Va.

Managing Editor and
Business Manager
MR. CHARLES LIVELY
Box 1031
Charleston 24, W. Va.

Associate Editors:
EDWARD J. VAN LIERE, M. D.
Morgantown, W. Va.
W. M. SHEPPE, M. D.
Wheeling, W. Va.
G. G. IRWIN, M. D.
Charleston, W. Va.
R. H. EDWARDS, M. D.
Welch, W. Va.

JAMES R. BLOSS, M. D., Editor Emeritus, Huntington

Vol. XLV SEPTEMBER, 1949 No. 9

SHALL WE LOSE OUR HERITAGE?*

By THOMAS G. REED, M. D.
Charleston, W. Va.

"We know what we are but know not what we may be."—HAMLET.

If we would add to the quotation from Shakespeare's "Hamlet", we would say that we know what we are, we know what we should be, but we know not what we may be.

We know that the history of medicine shows that in prehistoric times every man was his own physician. Medicine next was in charge of the heroes who in turn were followed by the priests and philosophers.

Although ancient Babylon, Ninevah, Egypt, India, China and the Incas had developed a high type of civilization, it was not until the time of Hippocrates, about 400 B. C., that medicine became a definite professsion. Hippocrates also gave to us the principles of the practice of medicine, and if we would rededicate ourselves to these principles we would not have the problem of public relations today.

These humanitarian principles have guided the thoughts and actions of our illustrious predecessors down through the centuries. They have guided the philosophical minds of Socrates and Plato, the practical Aristotle, the studious Galen, the artistic Da Vinci, the resourceful Pare, the presistent William Harvey, the stubborn John Hunter, the studious Claude Bernard, the courageous Larry, the observant Lister, the fearless Morton and Long, the skillful Pasteur, the eminent Roentgen, the brilliant Curies, the noted Banting and Best, and our own modern Fleming. Truly our heritage is great.

The founding of the American Medical Association brought with it the "Code of Ethics" in 1849; in 1903, the title was changed to "Principles of Medical Ethics". These principles were again revised and adopted by the House of Delegates of the American Medical Association at the Atlantic City Session in 1949. As stated in the preamble, they "are not laws to govern but principles to guide, to correct conduct", and they have remained the same for more than a century. They have been the lode-star that has led us to all our progress in medical science and to the betterment of mankind.

We know that the majority of physicians have received a call to the practice of medicine just as a minister is called to his ministry. These are the men and women who have carried the torch of medical science with Christian principles so that today we are not only the healthiest nation in the world but we are the healthiest nation that the world has ever known. We know also that although some of our members have missed their calling, they comprise a very small minority. It is just this group, however, that has brought about our most serious problem in public relations today; it includes our fee splitters, our rebaters, our over-chargers, our sterilizers, our shot artists, our ambulance chasers, our quacks with a medical diploma, our advertisers, our vitamin feeders, our unnecessary operators and, worst of all, our omnipotent pretenders—those who claim that they alone know the secret to the cure of a disease.

These misfits are not entirely children of the atomic age. We find that it has been necessary

*Annual Address of the President, West Virginia State Medical Association, 82nd Annual Meeting, The Greenbrier, White Sulphur Springs, August 4, 1949.

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

down through the ages to stop, take stock, and rededicate ourselves to humanity. The principles of the Hippocratic oath were undoubtedly established because the followers of Aesculapius had created the myth that he was the son of Apollo and that they alone knew the secrets to the cure of disease, and that they carried the favor of the Gods. The "Code of Ethics" of the American Medical Association was created to guide us in our medical consciousness. This has been only partially successful and we must again stop, take stock, and evaluate ourselves in the light of public opinion.

PUBLIC RELATIONS PROGRAM

The first phase of any public relations program is to develop a plan whereby a more careful choice is made of students who desire to enter our colleges for the study of medicine and to clean our house of those undesirables who are already engaged in the practice of medicine. Certainly the answer to this problem is not to be found in any of our present unsuccessful methods. To be successful, any plan should call for an evaluation of each individual before he begins the study of medicine, from humanitarian as well as from scholastic standards. No better description of an ideal physician could be found than that given by Hippocrates many centuries ago when he said, "All the qualities of a good philosopher should also be found in a physician: Altruism, zeal, modesty, a dignified appearance, seriousness, tranquil judgment, serenity, decision, purity of life, the habit of brevity, knowledge of what is useful and necessary in life, reprobation of evil things, a mind free from suspicions and devotion to the divinity."

Any plan will require the teaching of ethics in our medical schools, a phase of medical education about which many of them have forgotten; it will require the teaching of ethics by our hospital staffs on through the intern and resident years. It will require that each component medical society carefully scrutinize and police its own members. This last, I feel, requires no elaborate machinery. Each society, under our constitution, has the power (and certainly the ability) to clean its own house, and a housecleaning we must do if we hope to have a successful public relations program.

The second phase of any good public relations program is to provide a complete medical service with all the manpower and facilities that are available. Such a program means a twenty-four hour coverage plan by each component society. Our failure to do this so far has given rise to much adverse criticism.

In our larger societies, a complete coverage plan should be no great problem, as arrangements could be made with nurses, hospitals, or independent exchanges for coverage of calls for emergency service. Services should be staggered among the physicians equipped to make calls so that at all times a qualified physician would be available for emergencies.

In our smaller societies and in our rural areas, the establishment of a complete coverage plan offers obstacles in the lack of physicians and facilities. Even so, no area should be left without some provision for emergency service.

The third phase of any worthwhile public relations program is to provide a sound, positive and progressive medical care plan designed, at the same time, as a part of our armament in our fight against socialized medicine. We certainly cannot fight something with nothing. We cannot stand by idly (which we have done during the past ten years) and hope that the socialists, the communists, the bureaucrats, the planning economists and some labor leaders will not succeed. The philosophy of "get something for nothing" has been too well instilled into our people over the past twenty years by the socialists in our government to even remotely hope that this fight is going to be easy. It will require the combined efforts of every one of us to drive this foreign doctrine from our shores, and to preserve the free enterprise system so dear to the hearts of Americans. The public expects us to be the leaders. This leadership we must provide, and it must be positive.

VOLUNTARY INSURANCE

The basis of our positive program should be a voluntary insurance plan. Any insurance program that is developed should provide for hospital and medical care during a catastrophic illness, and for the loss of wages during an illness of the wage earner.

Voluntary insurance can be nonprofit or commercial, or both. It should provide for hospitalization, medical and surgical care while in the hospital, and diagnostic procedures by qualified physicians in their offices. Any nonprofit or commercial insurance plan should be set up so that our hospitals do not have a monopoly on clinical diagnostic procedures as is now the case with many of our Blue Cross and commercial insurance plans. Some of these have lead already to hospital control of the practice of pathology, radiology and anesthesiology and if this control is continued or extended, it will prove as great a hazard to the freedom of the practice of medi-

cine as compulsory health insurance. Generally speaking, experience with commercial insurance plans shows that many of them offer coverage equal to that of many of our nonprofit plans. Certainly, our Association should no longer recommend exclusively nonprofit plans. Any good voluntary health insurance program is our answer to compulsory health insurance.

The second part of any voluntary insurance program should supply means for providing an income to the wage earner when he is ill. This income should slightly exceed the daily wage in order to take care of the extra expense which inevitably haunts any family during illness.

The ideal method of providing for the continuance of the wage earner's income is an agreement between the employer and the employee whereby the regular wages, in the event the employee is unable to work because of illness, would be paid for a maximum number of ninety days in any one year. Such an agreement, plus a low cost group insurance, would help remove the dread specter of serious illness from the lives of families.

Health and accident insurance by groups and individuals has become a part of the American way of life. It should be extended as it provides for that individualism which is necessary for a democracy to survive.

A new type of health insurance, the United Mine Workers Welfare and Retirement Fund, has come into existence during the past year. Certainly, under the present method of management, it can be approved. We can help to make it what we desire or we can break it if we do not cooperate honestly. Our goal should be to give medical service to these people on the same basis that we serve our private patients that live under similar circumstances. The United Mine Workers insurance should be extended so that it covers all of the so-called "List" hospital contracts which have been a thorn in the side of the private practice of medicine in sourthern West Virginia for many years.

Further study should be made by industry and labor as to the methods by which this type of insurance could be extended to other industries, as it seems to be one of the answers to our problem of medical care.

RURAL HEALTH

The problem of rural health in West Virginia is not an easy one to solve because our rural citizens need many social improvements just as much as they need better medical care. The whole problem, after our rural health conference in May, seems to be one of education. These people have been taught for years how to conserve the soil and how to improve their livestock, and much progress has been made. They are eager, also, to learn of their health needs. This is our job, and they have asked that we provide the leaders, a request which we can and must fulfill.

Our rural areas need an extension of public health services so that every county has full time coverage. They need to set up their own voluntary hospital and medical care plans. They need aid in developing clinics and diagnostic centers. They need more physicians, and it may become necessary to subsidize these physicians at the local level in some of our communities.

FEDERAL AID

The question naturally arises as to what government can do to aid in hospital and medical care while at the same time preserve those principles of freedom which are the foundation of our great democracy.

If we know that an estimated 85 per cent of all taxes are collected by the federal government, we can see how difficult it is for the state and local governments to support a medical care program. This rapid centralization of the taxing power in the federal government over the past twenty years has lead to the breaking down of the ancient custom of the local government taking care of its own health needs. The local government is unable to take care of its indigent; it is unable to provide funds for hospital construction and expansion; and it is unable to continue the support of medical education.

This federal power to tax has endangered also many of our endowed institutions for research and medical education. We can no longer expect our philanthropists to contribute to our excellent medical colleges and foundations as they have in the past. This is exactly as our socialists and fellow travelers want it to be. To be successful, they must have an all powerful central government. They must have a planned economy that controls the lives of all citizens from the cradle to the grave. This philosophy of government is contrary to all of the principles of a democracy and it is a philosophy of government that the medical profession absolutely will not support.

It is necessary, however, that the federal government contribute toward our health needs. This can be and is being done without government control of our daily lives. Today, the government contributes to our public health services.

It gives grants in aid to state for rehabilitation and crippled children programs. These programs have proven to be entirely satisfactory.

The federal government can further support our health needs by giving grants in aid to states for indigent and medically indigent hospital and medical care, by giving grants to medical, dental and nursing schools for teaching, expansion and construction, by giving grants to qualified institutions for research in medicine and allied sciences, and by liberalization of the hospital construction act (Hill-Burton Bill) so that it will provide more funds, and on at least a 50-50 matching basis. These principles are embodied in bills that are under consideration in Congress at the present time. They preserve our freedom and they deserve our support.

MEDICAL EDUCATION

In our state, any over-all program for improving medical care is difficult to carry out because of the definite lack of physicians, especially in our rural and mining areas. We need 800 more physicians in this state to bring us up to the national average of one physician to 710 population. Assuredly, the majority of the members of our Association realize that it is impossible to increase our supply of physicians without providing for a complete medical education within the state.

The excellent and exhaustive studies made by our special committees during the past year show that it is becoming more and more difficult for nonresident students to enter state supported and privately endowed schools for the study of medicine. The present basic science school in connection with our state university has always trod on rocky ground, and if it had not been for the efforts of many members of our state association, it would have ceased to exist long ago. Today, its position is more precarious than ever. The physical plant is scheduled to be removed and no appropriations have been made for its replacement.

Even if appropriations were available for a new physical plant, it would be exceedingly unwise to expand facilities beyond the present capacity of 30 students annually because of the near-impossibility of transferring more than 30 students to other schools. The present arrangement with the Medical College of Virginia to take 20 transfers annually is only a stop-gap agreement, and it can be terminated at any time by the Virginia legislature. The seriousness of the situation with which we are confronted can be shown by statistics which reveal that our ratio of physician per capita is rising rather than falling toward the national average.

Our Association has repeatedly worked for a complete medical education within our own state. During the past year its officers, its various committees and a vast majority of its members have waged an intensive campaign but again we have been unsuccessful, chiefly because of a lack of unity among ourselves, a lack of vision by the prominent educators of our state, and our state sectionalism. We must overcome these obstacles if we hope to supply better medical care for our people, and the experience gained in our last fight should make our task easier in the near future.

We have found that our leading educators feel that a complete medical education is not necessarily a part of a great university. Certainly we have received no support from any of our present institutions; thus, we must conclude that if we are to establish a four year medical school in West Virginia, it must be done independently.

We have found also that sectionalism, especially among our leading politicians, is quite prevalent. These gentlemen, in fact, are more interested in being re-elected by having some project established in their own district, whether they can support it or not, than they are in any course of action that would be benefit to the state as a whole Assuredly, a small minority of the members of our Association belong in this category, and it is hard to understand how, after apparent complete unity, newspaper and chamber of commerce pressure could bring about a lack of unity that might delay this project for years.

If such unity is the type that we can expect in our national and state campaigns against socialized medicine, we cannot hope to be successful. Already our socializers are at work. They have produced our Boazes and our Frothinghams, they have produced our prominent teachers who were so eager to get into print in opposition to the American Medical Association program, and they have produced the members of our own Association who have failed to support this campaign.

Our Association is at the crossroads. We can go forward to greater achievement, with freedom, or we can be the slaves of an all powerful state. Our unity alone will decide the issue.

Finally, the battle lines are drawn. We must choose between the principles of a materialistic state and those of a Christian democracy. We, as physicians, have but one choice: the principles of Christian democracy. These are our heritage.

And, once again, in the timeless words of our immortal Lincoln, "Let us here highly resolve that . . . . . this nation, under God, shall have a new birth of freedom, and that government of the people, by the people, for the people, shall not perish from the earth."

GROWING OLD GRACEFULLY—AND HAPPILY

To discuss in detail anti-aging recommendations would be time consuming. The recommendations are those which are necessitated by the history form findings (not forgetting psychogenic factors) and the physical examination. Here we can give only broad principles to guide one in these recommendations.

Never inactivate an older person completely. Usually what they do is not as important as how they do it. Older people need more warmth, more rest, less work and less food.

The physician is attempting to make one live not only longer but happier. Never impose your scruples relative to smoking or drinking on the patient.

Do not allow older people to tell their troubles over and over. Do not ask them to repeat their troubles on every visit.

Encourage personal appearance. Flattery goes a long way in accomplishing this.

Encourage the family to carry out niceties throughout the year instead of a party on "mother's day" after which grandma waits patiently but neglected for one more year.

By all means, recognize early mental changes. Look for a hidden drug habit in these cases; such, as, bromo selzer or bromides.

Never deceive an older person. Correct their memory lapses of names. Too often they recognize their mistake later and lose their confidence.

These are but a few guiding principles in health counselling the geriatric patient. The physician who has a good self history form should study it carefully and thoughtfully before advising any change for the patient. Seek out their causes of insecurity. Many are correctible.—Louis J. Ruschin, M. D., and Andrew H. Meyer, M. D., in Bulletin, Alameda Co. (Cal.) Med. Assn.

THE GOOD EARTH GIVES

More than 30 years ago a then little known microbiologist began a study of soil bacteria which has led to the development of bacteriostatic substances parallelling the sulfonamides and penicillin in their therapeutic value in certain diseases. As a result, his name, Selman A. Waksman, will be remembered with those who have developed similar antibiotics during the past decade.

Up to a short time ago he was best known for streptomycin but he has just announced a similar antibiotic which he called *neomycin*. This is the latest of the growing list of agents which have been derived from the "good earth" and with which it may become possible to combat diseases that have failed to respond to any previously known remedies.—International Med. Dig.

PYLORIC STENOSIS: ITS PROBLEMS AND MANAGEMENT

(Report of a Case)

By CLAUDE A. FRAZIER, M. D.*
New York City
and
J. OGLE WARFIELD, M. D.**
Washington, D. C.

Pyloric stenosis is a congenital anomaly. The majority of cases (85 per cent) occur in the male, usually in the first-born, and occur with equal frequency in those either artifically or breast fed. The condition is uncommon in the colored race, and there is a tendency for it to be familial.

In these cases, the pylorus is thicker and longer than usual and may be twice the normal size. Biopsy examination of the pyloric tumor usually shows whorls and bundles of smooth muscle with thickening of the muscular coat. There is intracellular and extracellular edema. The lumen is greatly narrowed.

The usual classical symptoms of projectile vomiting, loss of weight, constipation, visible peristaltic waves and a palpable pyloric tumor are not always present. There may be variations in this picture. There may be only occasional vomiting at first which may later develop into the typical clinical picture. Also, the onset of the vomiting which usually occurs at two to three weeks of age may be delayed until the second or third month of life.

Ladd, of Boston, claims that the tumor may be palpated in 98 per cent of cases, while Schaefer and Erbes, of Milwaukee, palpated the tumor in only 63 per cent. When the cardinal symptoms and signs are present, including a palpable tumor, x-ray examination is not necessary. In cases in which a palpable tumor is not present, the diagnosis may be confirmed by x-ray findings of prepyloric narrowing with a string sign.

Caffey believes that the important roentgen signs of pyloric stenosis are elongation of the pyloric canal, delay in or failure of opening of the pylorus, prolonged gastric emptying time and gastric dilatation with or without excessive peristaltic activity.

Once the diagnosis is made the operation is comparatively simple. The postoperative course usually is good. However, in a few cases there are some postoperative difficulties which can offer a difficult problem. It is the purpose of this paper to present such a case and its management.

---

*Resident in Pediotric Allergy, Roosevelt Hospitol, New York, N. Y.
**Member Surgical Attending Staff, Children's Hospitol, Washington, D. C.

CASE REPORT

D. M., a one month old white male, entered Children's Hospital September 28, 1947. Born of a full term pregnancy, at which time he weighed 8 lbs., 9 oz., this infant was fed evaporated milk until he was ten days old. He then began to regurgitate part of his feedings, and the formula was changed to Similac. The vomiting became progressively frequent and on admission he was retaining very little nourishment in spite of sedatives. The vomiting was not described as projectile in character.

Physical examination on admission revealed a rather large, well developed and well nourished white male infant who was very restless, fretful, and who continually chewed his hand. His weight was 8 lbs., 6 oz. The pertinent physical findings were confined to the abdomen. An olive size tumor was felt deep in the epigastrium 1½ cm. above and to the right of the umbilicus. Following a feeding, gastric peristaltic waves were observed, followed by projectile vomiting. A hemogram revealed a hemoglobin content of 18 Gm. per hundred cubic centimeters and a normal leukocyte count. Urinalysis was negative.

Following parenteral fluid replacement, the infant was operated upon on the fifth hospital day. Under drop ether anesthesia, through a right rectus incision, a classical Fredet-Rammstedt pyloroplasty was done for a typical pyloric stenosis. A transfusion of 100 cc. of citrated blood was administered postoperatively. Similac feedings were resumed and were well tolerated, but the infant continued to vomit small amounts. His weight when he was discharged on the twenty-seventh hospital day was the same as on admission.

Approximately one month later this patient reentered Children's Hospital with a history of vomiting part of each feeding since his comparatively recent discharge. The frequency and amount of vomiting had gradually increased and had become projectile several days prior to reentry. Olac and whole lactic acid milk feedings had been used without benefit.

Physical examination at this time revealed a marasmic, poorly nourished, dehydrated, three-month old male infant weighing 8 lbs., 9 oz. The temperature was 99 F. The anterior fontanelle was open and slightly depressed. The skin was dry and of poor turgor. The anterior cervical nodes were palpable. The abdomen was moderately distended with abnormal prominence of the superficial abdominal veins. On palpating the abdomen a small, hard, round tumor was felt in the region of the pylorus.

On admission, the infant was placed on a formula of Hypoallergin and Alderdex thickened with Cream of Wheat and supplemented by elixir of phenobarbital. While on this regimen about one-half of each feeding was retained. Daily administration of subcutaneous fluid and a transfusion of 100 cc. of citrated blood resulted in a weight gain to 9 lbs., 8 oz. by the fifth hospital day. The infant was given two plasma transfusions and on the seventeenth hospital day the abdomen was reopened and a distinct pyloric tumor found; the circular muscle fibers were separated with difficulty because of scar tissue present from the previous operation. A pyloroplasty was done. Postoperatively, the Brennemann routine of oral feeding was instituted, using evaporated milk. On the first postoperative day, signs of pneumonia of the left lower lobe developed. The infant was placed in an oxygen tent and penicillin therapy started. The complication was readily controlled and the patient's temperature returned to normal on the fourth postoperative day.

Periodic vomiting of part of the formula, which was associated with a slight weight loss, recurred on the fifth postoperative day. At this time cereal and puree of vegetables were added to the diet, as well as protein hydrolysate. The vomiting continued and the infant's weight failed to increase. A dilute lactic acid formula was used unsuccessfully. Clinical suspicion of a subdural hematoma was ruled out by a regular subdural tap. On the forty-second hospital day Nutramigen feedings were commenced and supplemented by the use of tincture of belladonna and elixir of phenobarbital. On this regimen the vomiting promptly ceased and dextrimaltose was gradually added. A weight gain of 10 ounces occurred in the ensuing week. The daily caloric value of the Nutramigen formula was gradually increased to 820, with a continued rise in the infant's weight. He was discharged approximately three months postoperatively, at which time his weight was 11 lbs., 6 oz.

DISCUSSION

This infant presented quite a problem, especially on his second admission to the hospital. There was some question as to a combination of factors being present, i. e., pyloric stenosis plus an allergic basis for the vomiting. The possibility of the pyloric stenosis being present was borne out at time of operation. Subsidence of the vomiting which occurred postoperatively with a cor-

respondingly gain in weight of the patient after nutramigen feeding was begun may indicate an allergic basis for the vomiting in addition to the stenosis. There was a good possibility that both were present.

There has been a great deal of discussion as to most opportune time to begin feeding after the operation. Taber and Davis found by x-ray study that the stomach postoperatively required from eight to twenty-four hours to empty. In view of this, it would seem that postoperative feeding should be carried out slowly and gradually until the fifth or seventh postoperative day, at which time the baby could be returned to a full feeding schedule.

Recurrence of pyloric stenosis is not recurrence in the true sense of the word since it usually is due to incomplete operative division of the pyloric fibers. This probably is due to the surgeon's being concerned about the possibility of perforation at the time of operation. The pyloric tumor gradually tapers off into the stomach wall, but ends abruptly at the duodenum where the mucosa is more intimately attached to the submucosa and the chance of perforation is greatest.

We would like to offer two suggestions as aids in preventing the so-called "recurrences":

1. An absorbable hemostatic sponge, such as "Gel Foam," may be used to control bleeding which occasionally occurs and which is difficult to control with ligature. Such a sponge loosely placed between the cut ends of the pyloric muscle so as not to cause pressure on the bulging mucosa and thus produce obstruction might prevent too rapid healing of the muscular incision with subsequent recurrence.

2. A measure which would insure that all constricting muscle fibers are completely divided would be the mounting of a large magnifying glass upon an adjustable stand to be used during the operative procedure.

SUMMARY

A case of pyloric stenosis with recurrence is presented. Its problems and management are discussed.

REFERENCES

1. Ladd, W. L., Ware, P. F., and Pickett, K. L.: J. A. M. A. 131:647.
2. Caffey, John: Pediatric X-Ray Diagnosis, Chicago, The Year Book Publishers, Inc., 1946, p. 427.
3. Taber, H. K., & Davis, J. H.: J. A. M. A. 114:847, 1940.

PROLAPSE OF THE GASTRIC MUCOSA INTO THE DUODENUM*

(A Preliminary Report)

By A. B. CURRY ELLISON, M. D.
and
E. W. SQUIRE, M. D.**
Charleston, W. Va.

Although cases of prolapse of the gastric mucosa into the duodenum apparently are not often reported in the medical literature, our observations during the past year have led us to believe that this occurrence perhaps is not so rare as would appear at first glance. Since the beginning of our interest in such cases, our radiologic colleagues have discovered a number of them.

The condition apparently was first described by Von Schmieden in 1911, but was not until 1925 that Eliason and Wright[1,2] called it to our attention. In an incomplete review of the literature to April 1948, we have found a total of 60 reported cases.

ETIOLOGY

The etiology is not definitely known but there have been several theories proposed. It appears to us that there are perhaps many factors which might be involved, some of which were present in our cases and not in others.

Eliason[1] brought forth the idea that chronic irritation of the gastric mucosa due to physical, chemical, nutritional, functional or bacterial causes might result in chronic inflammation and hypertrophy, which are increased by peristalsis of the stomach and the gastric contents.

Golden's[3] observation on antral systole may throw further light on the etiology. He has noted that in some cases the mucosal folds run transversely to the long axis of the stomach and during antral systole these assume a longitudinal course and may move cephalad. If this cephalad movement fails to occur, then the mucosa could be shoved through the pyloric canal.

Rees[4] proposes another mechanism in which the pyloric canal becomes narrowed, changes in the gastric mucosa and increased peristalsis of the stomach then taking place in an attempt to force the contents through the smaller pyloric canal. This action would tend to loosen the mucosa from the muscularis.

Scott[5] proposes that conditions necessary for prolapse are inherent in the normal stomach but that prolapse of the gastric mucosa occurs only

*From the Department of Medicine and Radiology, Charleston General Hospital, Charleston, W. Va.

**Doctors Ellison and Squire propose to publish follow-up studies (including x-ray interpretation) on this condition at a later date.

after the flexible fibers of the submucosa have become stretched and loosened by abnormal peristalsis which, in turn, is initiated by neurogenic or chemical stimuli or a combination of both.

The emotions, such as worry, fear and excitement, affect gastric functions. Feelings of resentment, insecurity and nervous tension also altar gastric function. It is well known that excessive use of tobacco, alcohol, coffee, excessive fatigue and lack of sleep disturb the physiology of the gastrointestinal tract.

SYMPTOMS

The symptoms of prolapse of the gastric mucosa are not diagnostic of the condition. The patients usually have complaints referable to the upper gastrointestinal tract, and then the lesion is found by the radiologist. We suspect that most of these patients are thought to have a peptic ulcer, but if one analyzes the history carefully, he might find that the story is not exactly typical of ulcer type distress with periodicity, burning in the epigastrium and relief by food or alkali. We have been impressed by a cramp-like distress in the epigastrium of varying severity and this may be worse under nervous tension. This may simulate pylorospasm. Two or three of our patients have had most of their distress at night or during the early morning hours. Some of them complain of a vague type of epigastric distress described as fullness or burning, or merely as an uncomfortable feeling in the upper abdomen. Vomiting, with or without nausea, occurs at irregular intervals. Emesis often produces relief of the distress. Gross hemorrhage has occurred in two of our six cases, one of which was associated with a duodenal ulcer. A persisting anemia and weight loss have been described in some instances but so far have not been observed by us.

Until more definitive symptoms are determined, we believe we should suspect the condition in any atypical ulcer history, especially in those cases with epigastric, cramp-like pain and in those associated with emesis, with or without nausea. There are variations in the amount of prolapse and likewise in the severity of symptoms.

PATHOLOGY

None of our six cases has had surgical confirmation as yet, so we can only cite the pathology of which we have read. This seems to vary somewhat from case to case. The only constant finding has been a loosened mucosa over the submucosa and muscularis. Edema of the mucous membrane, round cell infiltration, some eosinophilia, small to large ulcerations of the mucous membrane, polypoid formation and malignant changes, all have been described.

The clinical laboratory reports have not been too helpful. Two of our cases have had low total acid; one, no free acid. We have not seen the hypochromic types of anemia described, other than in the acute hemorrhage cases. Occult blood has been described in the stools.

TREATMENT

We believe that medical management should be tried before surgery in most cases. At the present time, we believe that chewing the food well is important. We have stressed a more or less typical ulcer-type regimen with reference to diet, antispasmodics, sedation, psychotherapy, and the avoidance of tobacco and alcohol.

We believe that surgery should be reserved for the severe type of case and that the indications are about the same as those for duodenal ulcer, namely, obstruction, repeated hemorrhage or "continued" anemia and repeated and frequent attacks of severe pain; Likewise, we advocate surgery in those cases in which malignant change is suspected.

Various types of surgical treatment have been used, including gastroenterostomy, resection of the redundant mucosa, pyloroplasty and partial gastric resection. Each of the different procedures has its advantages, and it is perhaps too early to tell which is the operation of choice.

SUMMARY OF FIVE CASES

Mr. B.D.R., aged 55 years, complained of intermittent substernal burning of two years' duration, intermittent abdominal fullness for one year, dysphagia occasionally for one year, and a "sticking sensation" in the midepigastrium during the past year. The aforementioned symptoms were made worse by alcohol. X-ray of the stomach in May 1947 was negative; x-ray in October 1948 showed protrusion of the gastric mucosa into the duodenum. Poorly chewed foods still produce periods of emesis.

Mr. J.F.S., aged 50 years, was well until about November 1947, when he began to suffer emesis without nausea every morning before breakfast. He had a severe attack of right upper quadrant pain which was diagnosed as cholelithiasis. Cholecystectomy was performed in February 1948. He got along well for two or three weeks, when he had a return of the emesis with vague midepigastric distress. An X-ray of the stomach

in March 1948 showed prolapse of the gastric mucosa and a diverticulum of the duodenum. Gastric analysis, with Ewald meal in 1942 showed total acid, 19; free hydrocholoric acid, 7. Gastric analysis in January 1948 showed no free acid and total acid, 2.

Mrs. C.M.S., aged 58 years had had some burning in the epigastrium also bloating, intermittently since 1933. Her distress was worse at night, also after ingesting fats and condiments, and was not always relieved by food or alkali. There was a history of tarry stools in 1943. Gastric aspiration done by a local physician in 1943 was said to show too much acid. There was no nausea or vomiting. X-ray of the stomach in January 1949 showed prolapse of the gastric mucosa and a hiatal hernia. Poorly chewed foods still produce periods of emesis.

Mr. J.M.M., aged 38 years, complained of gas on the stomach and "cramps" intermittently of two years' duration. These symptoms appeared mostly at night and during the first two hours after arising. He was never troubled during the day. Food or alkali gave no relief. Getting up and moving around seemed to help the cramps. There was no nausea or emesis. The patient had always enjoyed highly seasoned foods and usually had four or five drinks of whiskey during the weekend. Gastric analysis after an alcohol test meal showed total acidity 27; free hydrochloric acid 16. X-rays of the stomach in November and December 1948 showed polypoid thickening of the gastric mucosa with protrusion of the mucosa into the duodenum. There was some irregularity of the duodenal mucosa but no ulcer was visualized.

Mr. C.H.Y., aged 48 years, complained of upper abdominal soreness and aching with some belching, in June 1948. This was a typical ulcer distress with periodicity, food and alkali relief. In August 1948, the patient was hospitalized for treatment after a massive gastrointestinal hemorrhage. X-ray examination showed a duodenal ulcer with crater and prolapse of the gastric mucosa. A repeat x-ray in January 1949 showed no ulcer crater, but the prolapse of the gastric mucosa remained. This patient has been asymptomatic since treatment with ulcer diet and antispasmodics was instituted.

BIBLIOGRAPHY

1. Eliason, E. L., & Wright, V. W. M.: Benign Tumors of the Stomach, Surg., Gynec. & Obst. 41:461, 1925.
2. Eliason, E. L., Pendergrass, E. D., & Wright, V. W. M.: The Roentgen-Ray Diagnosis of Pedunculated Growths and Gastric Mucosa Prolapsing Through the Pylorus: Review of the Literature, Am. J. Roent. and Radium Therapy 15:295, 1926.
3. Golden, Ross: Antral Gastritis and Spasm, J. A. M. A. 109:1494, 1937.
4. Rees, C. E.: Prolapse of the Gastric Mucosa Through The Pylorus: Surgical Treatment, Surg., Gynec. & Obst. 64:689-694, 1937.
5. Scott, W. G.: Radiographic Diagnosis of Prolapsed Redundant Gastric Mucosa into the Duodenum, with Remarks on the Clinical Significance and Treatment, Radiology 46:547-568, 1946.

CANCER OF THE COLON AND RECTUM

In 1944, for the first time, cancer of the colon and rectum (considered as one organ) exceeded cancer of the stomach as the most frequent cause of death from cancer, as reported in the Vital Statistics of the Bureau of the Census.

When it is recollected that cancer of the stomach is the second most frequent cause of death from cancer, it is readily apparent that cancer of the alimentary tract is demanding of special attention. Whereas most of our information concerning the frequency of various cancers stems from the Vital Statistics, constituting reports upon patients dying of cancer, we are beginning to get more exact information concerning the relative incidence of various cancers.

Cancer registries will prove helpful on this score. From information compiled by the Connecticut and New York state cancer registries, it is becoming apparent that tables of death from cancer (vital statistics) and incidence are not strictly comparable. The incidence of breast cancer far exceeds that of any other single organ cancer in both sexes. Moreover, cancer of the uterus appears to be about as frequent as cancer of the stomach in both sexes. Cancer of the colon and rectum together in both sexes occurs more frequently than cancer of the uterus. The combined incidence of cancer of the stomach and colon and rectum in both sexes is somewhat greater than that of the breast and uterus for the female sex alone.

In other words, treatment is making an impress upon the cancer problem; otherwise, the tables of incidence and mortality would be strictly comparable.

The most frequent cancers in the male by organ are (1) colon and rectum, (2) stomach, (3) prostate, and (4) lung. In the female these are (1) breast, (2) uterus, (3) colon and rectum, and (4) stomach.

When more states follow the examples of Connecticut and New York in recording the incidence of cancer, we shall be able to know, better than we know now, the impacts of cancer education, pleas for earlier diagnosis, and radical treatment upon the cancer menace.—Owen H. Wangensteen, M. D., in Wisconsin Med. J.

SIGHT CONSERVATION

As the spotlight of public attention is played on our aging population and on the increased prevalence of degenerative diseases, an opportunity will be offered to point out to better advantage the increasing incidence of glaucoma and cataracts, as well as the need for doing something about them. Just as there is a time to operate for cataracts, so there is a time to promote actively a public health program. The present time seems particularly suited to begin planning an expanded sight conservation program.—A. L. Chapman, M. D., in Sight-Seeing Review.

SARCOIDOSIS*

A Review of Eleven Cases Including Two Autopsies

By RALPH H. NESTMANN, M. D.**
Charleston, W. Va.

Boeck's sarcoid (sarcoidosis) is still an incompletely understood disease, and it is felt that the report of these eleven cases will prove interesting. Nine of the cases have been followed in the Indianapolis General Hospital and at Sunnyside Sanatorium; two were studied by private physicians. Ten patients were negroes and one was white. The age incidence ranged from 19 to 61 years. Ten patients were 45 years old or less, which is in acord with other reports that sarcoidosis is a disease of young adults.

In this series of cases, I have made an effort to study the disease from the clinical, radiologic, histologic and laboratory points of view. After having missed the correct diagnosis in several instances, a certain plan of study was adopted. Although it is admittedly inadequate, it has, nevertheless, enabled me to recognize sarcoidosis which otherwise might have been overlooked. Any case of pulmonary disease with radiologic evidence of enlarged hilar glands, usual or unusual parenchymal shadows *and* skin or eye lesions should be investigated for sarcoidosis. The study should include routine sputum examinations (smears and cultures) for acid fast bacilli, bronchoscopic examinations with study of bronchial aspirations for acid fast bacilli and malignant cells, serial Mantoux tests starting with 1:10,000 old tuberculin and continuing to 1:10 dilution, guinea pig inoculation with sputum or gastric washings, determination of the protein concentration of the serum and serum calcium, and biopsy of a lymph node, skin lesion, tonsil, or subcutaneous nodule.

Other writers[3,6,9] have emphasized that there are no pathognomonic features of this malady. Bates and Walsh[9] have shown that many diagnoses were entertained before sarcoidosis was considered.

The following complaints in order of frequency were recorded to further stress the nonspecificity of symptoms of this disease: six complained of a productive cough but only one noted blood specks in the sputum; four complained of exertional dyspnea; eye symptoms and skin lesions were noted four times; night sweats were observed three times. In one case the ocular pain was so severe that repeated paracenteses were required. Weight loss was present in seven cases. Orthopnea, weakness, nausea and vomiting, chills, fever, anorexia and lymphadenopathy were encountered less frequently.

All but one had abnormal chest roentgenograms. Four of these patients were hospitalized for tuberculosis. Bone lesions were not found in any of these cases.

Complete hemograms were made in all but one case. Leukocytosis was not found; leukopenia was present in two cases. Eosinophilia of 8 per cent and 12 per cent respectively was noted in two patients (not the two with asthma), and monocytosis of 8 per cent in another; lymphocytes were increased in four; neutrophils were increased once only.

Electrocardiograms were made in cases 2, 6, 10 and 11. In cases 2, 10 and 11 the tracings were normal, and paroxysmal auricular tachycardia was found in case 6.

Three patients showed a positive reaction to 1:10,000 O.T.; six were negative to O.T., P. P. D., or Volmer patch test; four had a contact history with tuberculosis. Three patients have had positive sputums, and one showed tuberculosis and sarcoidosis in the same biopsy specimen. Asthma was a concomitant disease in two cases. All showed a definite elevation of the sedimentation rate. Sarcoidosis was demonstrated in all patients upon miscroscopic examination of tissue obtained from lymph node, or skin lesions, or subcutaneous nodules.

CASE REPORTS

The two cases which were studied at necropsy will be reported in detail.

Case 6, A. L. R. was hospitalized at Sunnyside Sanatorium in July 1945 by her local physician because of abnormal findings on her chest roentgenogram. On admission she was weak, had a cough productive of white and yellow sputum, had episodes of chills, fever, sweats, dyspnea and nervousness. She also noted impairment of vision in her left eye, a rash on her legs, and palpitation. There had been a ten pound weight loss.

Physical examination showed an opacity that obscured the left pupil. Multiple skin lesions were observed on the forearms, thighs, and about the trunk. There was a lessened expansion of the chest on the right. Tactile fremitus was

*From the Department of Medicine, Indianapolis General Hospital.
**Paper was written while the author was a resident in Medicine at Indianapolis General Hospital.
***The author extends thanks to Dr. Bennett Kraft and Dr. H. N. Middleton for permission to include their cases in this review, and to Mr. Sidney McDonald for chest x-ray negatives.

TABLE I

Case	Sex	Race	Symptoms and Duration	Age	X-Ray Findings	Plasma Proteins Gms. %	Alb. Gms. %	Glob. Gms. %	Date	Serum Calcium Mgs. %	Serology	ESR*	TBC Contact	Associated Conditions	Remarks
#1	F	C	Productive cough and dyspnea—3 years	31	Exaggerated hilar shadows and interstitial fibrosis.	6.6 8.1	3.5 4.16	3.1 3.94	(7-46) (5-46)		+	26 (C)°	Yes?	Asthma	Was well in May, 1948. Neg. PPD. 1st & 2nd Strengths.
#2	F	C	Vomiting, weakness, nausea, 10 pound weight loss, hematemesis—1-4 weeks	27	Diffusely disseminated granulomatous type of fibrotic infiltration, bilaterally. In 4-48 there was marked clearing	6.5 6.8 8.5 9.2 8.2 7.4	3.4 3.5 4.7 5.2 2.6 4.8	3.1 3.3 3.8 4.0 5.6 2.4	(8-45) (8-45) (11-45) (2-47) (8-47) (1-48) (3-48) (12-48)	 9.6 7.3 9.2	–	46 (W)°°	No	None	Had two positive sputum cultures in 1945; none have been found again on repeated examinations. O. T. 1:10 Neg.
#3	M	C	"Knot" in neck, 12 pound weight loss in 3 months	19	Negative: hands, feet, and chest.	7.4	3.7	3.7	(9-47)		–	11 (W)	Yes	Glandular Tuberculosis	Tuberculosis was found in biopsy specimen as well as sarcoidosis. O. T. 1:10,000 2+.
#4	F	C	Pain and discharge, left ear; sinusitis	24	Hilar adenopathy.	6.8	2.8	4.0	(2-48)		1+	28 (W)	?	None	None. Volmer Neg.
#5	M	C	Productive cough (once with blood streaks), 35 pound weight loss and dyspnea for 1 year	42	Finely granular miliary diffuse lesions bilaterally.	8.8	5.	3.8	(3-48)	9.4	–	23 (W)	No	None?	Yeast was found repeatedly in sputum. O. T. 1:1000 Neg.
#6	F	C	"Feeling had", no energy, weakness, productive cough, chills, fever, sweats, dyspnea, nervousness, poor vision in left eye, rash on legs, heart fluttering, weight loss 6 months-7 years	25	Extensive densities bilaterally.	8.9 9.1	4.56 2.7	4.34 6.4	(4-46) (7-46)		–	26 (C)	Yes	Late: Tuberculosis; Parosysmal auricular tachycardia	See text.
#7	F	C	Frequent cough and a cold for 3 months	36	Fibrocascous infiltration upper 1/3 right lung. Infiltration in periphery left lung. No cavitation; no effusion.	7.8	5.8	2.	(5-48)	8.4	–	26 (C)	Yes	Early: Tuberculosis	Had positive sputums until Aug. '46; positive gastric culture Dec. '46. O. T. 1:10,000 3+.
#8	M	W	Dyspnea, severe coughing, weight loss for 6 years	42	Extensive fibrosis and honeycombing of both upper lobes. Considerable atelectasis on right. Bases emphysematous. Diaphragm depressed. Bleb-like shadows right base.									Emphysema; Asthma	See text.
#9	F	C	Eye symptoms in 1943. None in 1948.	27	Right hilar enlargement, 1943; normal hilar areas, 1948.	7.7 8.3 7.3	5. 5.1 4.3	2.7 3.2 3.	(2-43) (8-45) (5-48)		–	13 (W)	No	Adenocarcinoma, right breast; pregnancy	Operated in '45 for carcinoma; '47 for secondary glaucoma, right eye; '48 for hysterectomy. O. T. 1:10,000 +.
#10	F	C	Pain in right eye, sore gums, urinary frequency—7 months.	45	Massive mediastinal adenopathy.	8.3	3.5	4.8	(5-48)	10.	2+	43 (W)	No	Hepatomegaly, eye involvement, skin lesions	O. T. 1:10,000 Neg.
#11	M	C	Hoarseness, enlarged axillary nodes, cough, "cold", rectal fistula, weight loss—2 months to 15 years.	61	Fibrosis of entire left lung; tracheal and cardiac deviation; honeycombing left mid-lung.	8.5	3.1	5.4	(11-48)	9.0	3+	34 (W)	No	Atelectasis; saccular and cylindrical bronchiectasis	Had similar film in '42. O. T. 1:10 Neg.

†Erythrocyte Sedimention rate.
°Cutler.
°°Wintrobe.

increased anteriorly and posteriorly except in the area between the posterior and anterior axillary lines.. There was lessened resonance on the right from apex to base, but this was marked in the axillary region. Whispered pectoriloquy was present over the entire right chest except in the axilla and inferiorly. Coarse rales were heard posteriorly, and post-tussic rales were heard all over the right chest. No abnormalities were found on examination of the left chest.

The laboratory findings are tabulated in Table I.

Fig. 1. (4-10-46) There is hilar enlargement more pronounced on the left. The left costophrenic angle is observed; the right cannot be identified. The right diaphragm is elevated. The mediastinum and heart are displaced to the right. There is marked fibrosis throughout the right lung with areas of rarefaction being present. There are a few fibrotic strands in the left lung. Diagnosis: Boeck's Sarcoid.

X-ray of the chest revealed extensive densities scattered throughout both lung fields (figure 1). Two skin biopsies revealed Boeck's sarcoid.

A later film (figure 2) showed a cavity in the left apex. Until the appearance of the cavity, repeated sputum examinations and gastric aspirations were negative for acid fast bacilli. One guinea pig was reported "negative". Just preceding the later film (August, 1946), the sputum became positive for acid fast bacilli and remained so. A guinea pig injected at the time of the patient's second admission in September 1946 was positive for tuberculosis.

An electrocardiogram made during an episode of palpitation showed paroxysmal auricular tachycardia. This was controlled with quinidine.

The patient's condition steadily deteriorated, and she died three months later, in December, 1946.

Autopsy showed the multiple skin lesions previously mentioned. Multiple white lesions were found throughout the liver and spleen, which organs weighed 1350 grams and 190 grams respectively. The left lung was bound down by many adhesions. Bullous emphysema was present along the inferior cardiac border. Many nodules were felt throughout, but these were more numerous in the upper two-thirds. On section a large cavity was found in the apex which was filled with necrotic material. The hilar lymph nodes were enlarged bilaterally. The right lung was bound down completely.

The sections were not completely satisfactory, but they were clear enough to establish the following facts:*

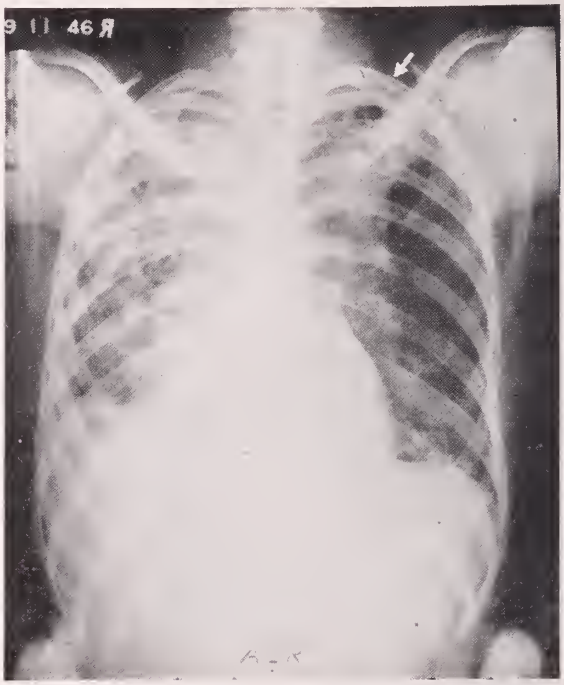


Fig. 2. (9-11-46) The right lung shows little change. In the left apex there is a definite cavity. There is a density inferior to the cavity not previously noted. The left costophrenic angle has cleared partially. Diagnosis: Boeck's Sarcoid; far advanced pulmonary tuberculosis.

The pleura was markedly thickened. In addition, there were large areas of subpleural parenchyma which was extensively fibrosed. In these areas the vessels were greatly thickened. They showed medial and intimal proliferation with severe impingement on the lumen. Throughout the section there were numerous discrete foci composed of small confluent tubercles. In these areas distinct caseation necrosis was noted (fig-

*The sections were studied and photographed by Dr. H. P. Friedman to whom I am greatly indebted.

ure 3), and occasional Langhans' giant cells were seen at the periphery. There was a heavy band-like infiltration with lymphocytes forming the periphery of these nodules. Alveolar spaces showed a patchy, lymphocytic infiltration often alternating with eosinophilic coagulum. The large and small vessels showed hyperplastic thickening.

In the lungs there was noticeable fibrosis about the large bronchi. This fibrous tissue as well as the epithelial tissue was heavily infiltrated with lymphocytes.

Marked chronic passive congestion was noted in the liver.

Except for some variation in calcification in the various lymph nodes, the picture in them was identical. This consisted of multiple round, irregular tubercle-like nodules (figures 4 and 5), some of which showed a typical epithelioid structure. However, the bulk of these structures was homogeneous and hyalinized. A central giant cell was noted in an occasional nodule. Due to the poor quality of the sections inclusion bodies could not be identified with certainty. A few nodes exhibited larges masses of calcium deposit, both within the sarcoid nodule and in the intervening stroma. Lymphoid tissue was sparse and occurred chiefly in foci of minor involvement. Of numerous lymph nodes examined only one area showing confluent tubercles and massive cascation was noted.

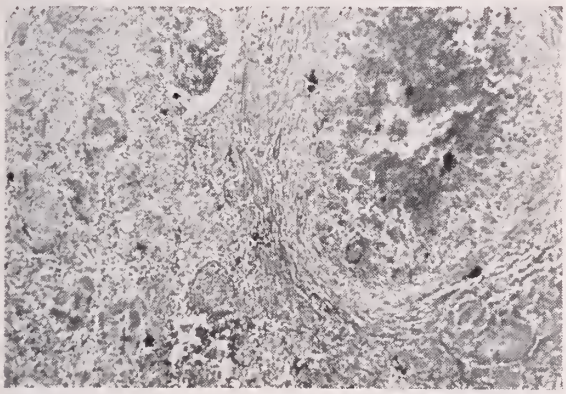


Fig. 3. Focus of tuberculosis showing central caseation (x100).

Of the two slides of the spleen studied, there was one small focus of caseation necrosis. In addition, there was a moderate number of scattered discrete, hyalinized, tubercle-like structures identical with those described in the lymph nodes.

In this case typical lesions of sarcoid and tuberculosis appeared side by side in the same node.

Clinical diagnoses: Sarcoidosis and tuberculosis.

Pathologic diagnoses: Bilateral pulmonary noncaseating tuberculosis, identical with sarcoidosis, associated with left apical pulmonary tuberculosis with cavitation, left lower lobe emphysema, bilateral pulmonary adhesions, and microscopic foci of tuberculosis in the spleen. Cause of death: Tuberculosis, caseating and noncaseating (sarcoidosis) involving the lungs, lymph nodes and spleen.

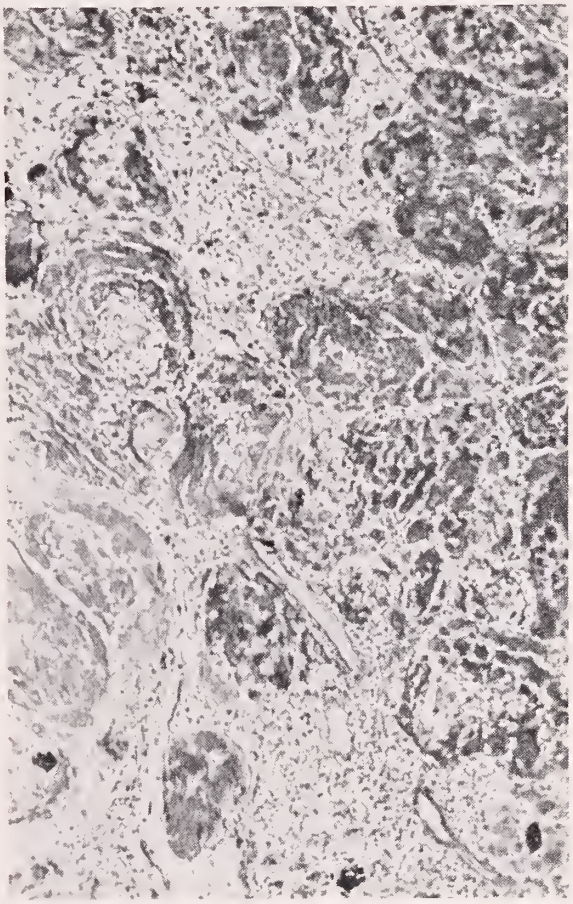


Fig. 4. Representative section of lymph node showing multiple partially hyalinized sarcoid nodules and foci of calcification. (x100).

Case 8.—J. E., in July, 1947, complained of shortness of breath, a severe cough and weight loss.

His mother had died of pulmonary tuberculosis. Two grand-parents had had bronchial asthma. A lymph node biopsy had been positive for Boeck's sarcoid five years previously.

Physical examination disclosed wheezing in both lungs. X-ray of the chest (figure 6) revealed extensive fibrosis and honeycombing in both upper lobes with emphysema at the bases. Atelectasis was present on the right, with the heart and mediastinum displaced.

The patient died during an asthmatic attack.

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

At necropsy* the spleen weighed 400 grams and revealed pink specks on the surface which were nodular to palpation.

The lungs were bound down by dense adhesions. The right lung weighed 465 grams, and the left 720 grams. Nodules were palpable throughout. The upper lobes were contracted, scarred and hard to palpation. Transection showed the apices to contain numerous cystic cavities of varying size which were lined with a dirty gray membrane. Areas of pinkish con-

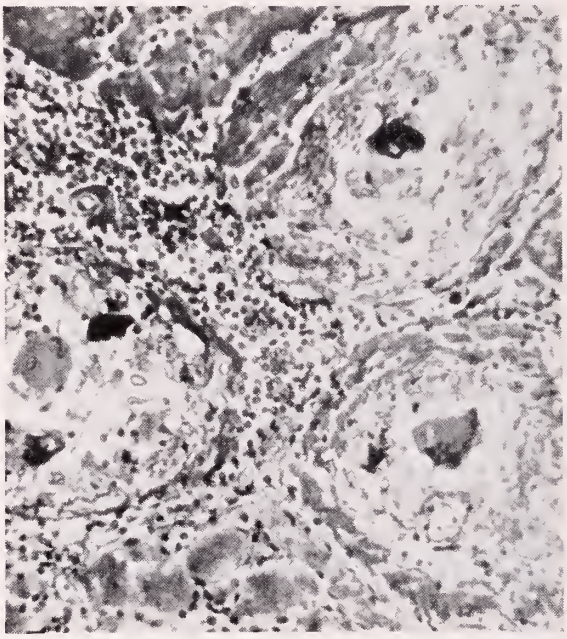


Fig. 5. Sarcoid Nodules similar to No. 4 (x750).

solidated parenchyma alternated with more normal, spongy, air-containing lung. In the lower lobes the consolidated areas appeared almost solid. Hilar nodes were greatly enlarged and firm in consistency. Transection showed a dark granular infiltration.

The most striking feature of the various sections of the spleen studied was the presence within them of tubercle-like formations, for the most part appearing in clusters of rather large size, although they also appeared singly in other places. Caseation, however, was not noted. The individual tubercles were composed of the usual epithelioid reaction of epithelioid cells in concentric ring-like form. A portion of these forms was occupied by large giant cells which were multinucleated. Rather than conglomeration of these tubercles, with degeneration and breakdown to caseation, there was a discreteness about the forms. There were no masses of lymphocytes at the periphery of these epithelioid forms; instead, there were a few scattered mononuclear cells of various types including plasma cells. Some phagocytosis was noted. Occasionally, one noted what appeared to be a collection of dark colored, disc-like objects which looked vaguely like crystals; these were in concentric layer formation. Closer examination disclosed that although these appeared to replace the giant cell in the center of the tubercle forms, they may well have been inclusions within the giant cells. Striking features of the spleen were the characteristic findings in these tubercle-like formations, consisting of a noticeable reticular fibrosis, no caseation, and the structures which appeared to be inclusion bodies. It should be emphasized also that the tubercles appeared to be discrete, distinct and well preserved.

Diffusely but rather generally throughout the liver parenchyma one noted singly, or in small groups of four or five, the same type of tubercle as described in detail in the spleen. About these there was likewise to be noted considerable fibrosis without evidence of caseation.

The kidneys were extremely contracted, apparently due to pyelonephritis. Tubercles of the same type as found in other organs were found in the medulla of the kidney.

The pleura of the lungs was everywhere thickened, primarily due to an overgrowth of

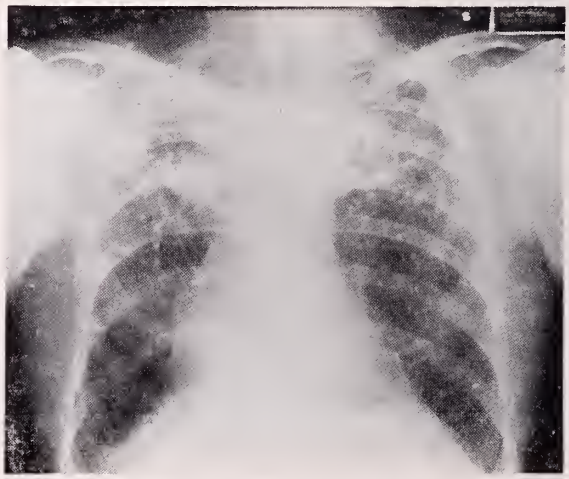


Fig. 6 (12-5-47) There is a dense infiltration and fibrosis in the upper lung fields bilaterally. Honeycombing is present bilaterally. What appears to be a large bulla is present in the right base. The heart is displaced a little to the right. Atelectasis is present on the right. Diagnosis: Emphysema; Boeck's Sarcoid; Atelectasis; Cavitation of unknown etiology.

connective tissue. The surface was rather shaggy. Some chronic inflammatory cells were seen; no exudate was noted. The parenchyma differed from place to place in various sections studied. In some areas alveoli had collapsed; in other areas alveolar walls had broken down leaving widened alveolar spaces indicative of

*Dr. H. M. Banks performed the autopsy and studied the sections.

emphysema. In still other areas the normal parenchyma had been replaced by massive fibrosis. The bronchioles and bronchi showed the usual ciliated epithelial lining. In some areas there was an increase in surrounding fibrous tissue which showed considerable infiltration with small round cells. The blood vessels were present in large numbers, particularly in the fibrotic areas. They showed thickening of the walls, narrowing of the lumina, and other evidences of hyperplastic sclerosis. There was some congestion of these vessels, particularly in the areas of fibrosis. No caseous necrosis was seen. There were numerous giant cells. The epithelioid reactions and the nodular fibrosis giving the picture of a chronic gramulomatous process could be found in other locations. Noteworthy was formation of cavities whose linings consisted of a dense, fibrous connective tissue, showing the epithelioid formation. Numerous deposits of the round granule-like reticulate matter were noted in the section of the lung.

Clinical diagnoses: Sarcoidosis, asthma, and emphysema.

Pathologic diagnoses: Bilateral apical pulmonary scarring, bilateral lower lobe emphysema, bilateral pulmonary adhesions, and sarcoidosis. Cause of death: Sarcoidosis involving lungs, spleen, liver and kidney.

Case 7 deserves special mention in that the patient had proven tuberculosis and was under sanatorium care when it was discovered that she had typical skin and subcutaneous (Darier-Roussey) nodules. Chest roentgenograms showed the usual resolution and fibrosis associated with healing pulmonary tuberculosis, and hilar adenopathy consistent with sarcoidosis. Biopsis showed sarcoidosis.

DISCUSSION

In this series of cases tuberculosis developed in one (Case 7), and later the typical skin lesions of sarcoid appeared. In the case described in detail (Case 6), sarcoid had been present for years when tuberculosis appeared, and the patient died soon thereafter. In case 3, sarcoid and tuberculosis were apparent in the same cervical lymph node.

Case 2* is remarkable by the extensive pulmonary changes noted over a three year period which dramatically resolved in a period of six months.

Case 3 is included in this series on the basis of the biopsy report alone. No skin, eye, or pulmonary lesions were noted. The blood studies did not help. It is my feeling that this case is not well supported as a definite case of sarcoidosis.

In case 9 there were eye and pulmonary changes in 1943. In 1948 complete resolution of the pulmonary x-ray findings was noted.

The albumin-globulin ratio was followed in these patients at intervals. It is interesting to study the changes in the ratio from time to time. No definite correlation can be made between the course of the disease clinically and either the total protein or the hyperglobulinemia.

The sedimentation rate, as has been reported by others, may be helpful in determining the activity of this process (table I). The sedimentation rate in all cases was elevated.

Some of the cases included would disagree with the criteria laid down by Nickerson[10]. However, it is felt that these cases are supported with adequate clinical, radiologic and pathologic studies.

CONCLUSIONS

In conclusion these comments can be made:

1. Because its manifestations vary no particular branch of medicine can lay claim to this interesting malady.

2. Radiologic studies show three types of pulmonary shadows: hilar enlargement, diffuse lesions throughout the lung fields, and fibrotic infiltration in the lung fields.

3. Hyperproteinemia and hyperglobulinemia are helpful in establishing the diagnosis. Elevation of the sedimentation rate may be helpful in determining the activity of the process.

4. Pathologic study is essential in establishing the diagnosis. The biopsy specimen may be taken from a lymph node, a subcutaneous nodule, tonsil, or skin lesions.

5. In this series of cases no bone lesions were found although searched for repeatedly by radiologic studies.

6. No specific method of treatment is advocated.

7. A plan is suggested whereby others may be brought to think of this disease.

REFERENCES

1. Boeck, C.: Multiple Benign Sarcoid of the Skin, J. Cutan. & G. U. Dis., 1899, 17:543-550.
2. Hamburger, L. P., & Schaffer, A. J.: Uveoparotid Fever As a Manifestation of Mikulicz's Syndrome, Am. J. Dis. Child., 1928, 36:434.
3. McCort, J. J., Wood, R. H., Hamilton, J. B., & Ehrlich, D. E.: Sarcoidosis: Clinical and Roentgenologic Study of Twenty-eight Proved Cases. Arch. Innt. Med., Sept., 1947, 80:293-321.
4. Michelson, H. E.: Sarcoidosis, J. A. M. A. 1948, 136: 1034-1039,

*Case No. 2 was reported by M. Mann et al., J. Ind. State Med. Assn., March, 1946, Vol. 36, 3:97-99. No. 9 was mentioned in the same paper.

5. Pinner, M.: Non-Caseating Tuberculosis, Am. Rev. Tuberc., 1938, 37:690.
6. Reisner, D.: Boeck's Sarcoid and Systemic Sarcoiditis, Am. Rev. Tuberc., 1944, 49:289-307; 437-462.
7. Rubin, E. H., & Pinner, Max: Sarcoidosis. Am. Rev. Tuberc., 1944, 49:146-169.
8. Scott, R. B.: The Sarcoidosis of Boeck, Brit. M. J., Oct. 15, 1938, p. 777, Vol. 2.
9. Bates, G. S., & Walsh, J. M.: Boeck's Sarcoid: Observations on Seven Patients, One Autopsy, Ann. Int. Med., 1948, 29:306-317.
10. Nickerson, D. A.: Boeck's Sarcoid: Report of Six Cases In Which Autopsies Were Made, Arch. Path., 1937, 24: 19-29.
11. Frieman, D. G.: Medical Progress: Sarcoidosis, N. E. M. J., 1948, 239:664-671; 709-716.
12. Longcope, W. T.: Sarcoidosis, or Besnier-Boeck-Schumann Disease, J. A. M. A., 1941, 117:1321-1327.

THE PATIENT SHOULD BE TOLD

How can we justify to ourselves all this talk of more lay education concerning cancer and then fail to inform patients they have cancer when we find it? Obviously, that position is absurd. Moreover, most of our patients somehow or another learn they have cancer. The very evasiveness of the physician makes them mistrust him and affords them occasion to believe the worst.

If a patient has any other disease we tell him; why try to keep this information from the patient when he has cancer? Some patients merely cooperate in the conspiracy and are careful not to let the physician know that they know they have cancer. Many times it is the patient's family that insists that the patient should not be told.

I follow the practice regularly of telling the patient. It is, I am sure, the wisest policy and makes for better understanding. If the cancer is early and the operation cures him permanently, a militant spokesman for earlier diagnosis and treatment of cancer is won over; if the lesion is late, the patient is grateful to be told.

All of us eventually have to consider taking a peek into eternity. The relatives of a patient with late cancer oftentimes are not willing to go through the patient's Gethsemane with him and hence urge not telling him such, that life may go on as usual for a bit longer.

Yes, the problem of cancer is bewildering, but this strange and inconsistent manner of dealing with an important aspect of it by the physician suggests definitely a fearful and anxious concern which in turn engenders more fear in the patient's mind than if he were told the truth. Misrepresentation may be construed legally to constitute fraud. Evasive insincerity is less blameless in a physician, and when does a man yearn more for sincerity than when he is ill? And in whom will a man scorn faithlessness more than in his physician?—Owen H. Wangensteen, M. D., in Wisconsin Med. J.

THE CHALLENGE OF CHRONIC DISEASE

Chronic disease constitutes a major challenge to the people of the United States and to their leaders in the medical, public health, and welfare professions. The challenge to the professions is to develop effective programs for the prevention and control of chronic diseases, including treatment, convalescent care, and rehabilitation of the patient.

Progress in control depends upon an expanding body of scientific knowledge concerning the causes, diagnosis, and treatment of these diseases. Because of the well known association of chronic illness with middle and late life, advances in our knowledge of the aging process are likewise needed.

The concept of control in the public health sense is broader than the concept of medical control of established disease in the individual patient. The experience of public health agencies in the past has shown beyond doubt that intensive search for disease in sizable population groups—supposedly health—will bring to light a surprisingly large number of cases in various stages of the disease under study. Frequently, more than half of the patients learn of their disease for the first time—and for the first time visit their physicians.

The chief aim of the public health control "drag net" is to bring to light the early or incipient cases, when the disease is least likely to be noticed by the patient and when it is most likely to yield to treatment.

The basic requirement for successful public health control is an effective diagnostic technic which can be applied with relative ease and economy to early case-finding in large general population groups. A second requirement is an effective, relatively simple treatment to arrest the disease or cure the patient, specially in the early stages.—Leonard A. Scheele, M. D., in Wisconsin Medical Journal.

PSYCHOSOMATIC MEDICINE NOT NEW

In spite of our advances in the organismic, structural concepts of disease, it has become increasingly evident that something essential is missing in our understanding of symptomatology and disease processes. We are finding out more and more about the members of the patient's body, and can spectacularly treat certain conditions, yet a great many patients remain undiagnosed and unaided.

What is this that is missing? For answer we can turn to the writings of many men, philosophers as well as physicians. Perhaps the most quoted is that of Plato who more than 2,000 years ago said: ". . . so neither ought you to attempt to cure the body without the soul; and this is the reason why the cure of many diseases is unknown to the physicians of Hellas, because they are ignorant of the whole, which ought to be studied also; for the part can never be well unless the whole is well. For this is the great error of our day in the treatment of the human body, that physicians separate the soul from the body."

This, then, is psychosomatic medicine. Obviously it is no new idea, for Plato in his day and every wise physician in his has been conscious of the need for considering a patient as a unity, and in evaluating both the emotional and physical mechanisms involved in the symptomatology or disease of the patient, and the relation of these factors to each other and to the patient. It is not a devaluation of soma, but an endeavor to throw the psyche into its proper perspective in the disease picture.—W. T. Thompson, M. D., in Southern Medicine and Surgery.

TUBERCULOSIS ABSTRACTS*

PRESENT STATUS OF TUBERCULOSIS CONTROL

The control of tuberculosis involves acquiring new knowledge—research; and distributing existing knowledge—education. Education involves the public and the medical profession. The doctor in his office is impotent unless the patient comes to him. The patient is in jeopardy unless he knows that he is a patient, and unless the doctor knows how to treat him. These principles are inseparable. The physician and the health educator are mutually dependent and inseparable allies in the campaign against tuberculosis.

One of the ways in which the progress of tuberculosis control is being retarded is putting the emphasis upon accomplishments, not upon the unfulfilled tasks. To believe the job is nearly done is dangerous, and the facts should be faced.

Forget about the reduction in tuberculosis mortality statistics for a moment and look at the present situation! Tuberculosis, today in the United States, remains the most important chronic fatal disease to be caused by a "germ," the most important of all diseases of young people, the most important of the truly preventable diseases.

More than this should be said—much more. Mortality statistics list tuberculosis in comparison with groups of other diseases. "Heart disease" is not one disease but many. It includes arteriosclerotic heart disease of the aged, rheumatic heart disease of the young, hypertensive heart disease of middle life, infectious diseases of the heart, and many rarer conditions.

Cancer is not a single disease, presenting one medical problem. Yet the various cancerous diseases are grouped for comparison with tuberculosis. Most cancer appears to be a degenerative disease of older age, most deaths from heart disease are incident to old age. Everyone has to die some day from some cause and these degenerative conditions will increase as our people live longer and longer lives.

Tuberculosis is also displaced on the list of causes of death by accidental deaths of all types—obviously an unfair comparison. Tuberculosis would rank higher if mortality tables grouped diseases properly. If listed according to preventability, or to age groups affected or to years of potential life lost, or to actual cost in dollars, or according to sorrow, hardship and frustration caused—there would be less complacency and more alarm at the present tuberculosis death rate.

If causes of death were listed according to organs affected, diseases of the lungs would stand high on the list. Diseases such as tuberculosis, asthma, bronchiectasis and pneumonia stand high. Pulmonary embolism and, among males, cancer of the lung are also extremely important.

There has been so much talk about scientific medicine that some people seem to think of medical practice as a technological pursuit—applying fixed formulas to compute the diagnosis. *Medicine is a ministry as well as a science, and the practice of medicine a calling as well as an occupation.*

Patients are people. They have intellect, imagination and emotions—they have souls. No two people react alike to the same disease and few human miseries are caused entirely by pathologic alterations of body structure. Symptoms are almost always caused by a blend of pathology with fear, apprehension, and perhaps fatigue. The majority of persons seeking medical advice have no significant organic disease. Their symptoms are due to misbehaving organs, not diseased organs. These complaints are called "functional" as distinguished from "organic" or structural defects. But functional complaints are real, not imaginary, and often they are curable. And when organic disease strikes—tuberculosis, heart disease, cancer—the emotional aspects, the functional disturbances are as real and often more disturbing than are the pathologic alterations. Even major surgery is to the normal person frequently more of an emotional than a physical experience.

The modern school of medical practice believes in full and complete instruction of the patient. He not only may, but must know the facts, good and bad. He is not the subject of medical treatment but the partner of his physician and shares the task of achieving recovery. Patients see their X-rays; they know about laboratory tests; they know the diagnoses and something of the future.

The modern physician sees a greater duty than that of restoring to a state of health people who feel ill. He advises normal well people how to remain well, happy, and productive. He is learning how to examine well people and to avert many of the tragedies which occur when his advice is sought belatedly. Through his knowledge of personal hygiene, immuniaztion, nutrition, and the nervous system, he may prevent disease and interpret functional symptoms.

In the prevention of disease the physician has allied himself with public health experts, field workers, and executives. These are trained educators, inspired and diligent crusaders, who not only work beside the physician—they work ahead of him. They make possible the application of his skills and arts to vast numbers of people otherwise beyond the doctor's reach. Physicians should know more of these professional allies and the knowledge and training which they may possess. He should use them as consultants in medical problems of social and community significance.

We are now on the right track to achieve the great task remaining—the control of tuberculosis. There are vastly more effective methods of detecting and treating tuberculosis and other chest diseases than ever before. The relative roles of health educators, epidemiologists, sanatorium physicians, private practitioners are beginning to be seen quite clearly. Let no disrupting revolution in medical practice prevent this major achievement of the progressive American system of medicine.—The Present Status of Tuberculosis Control, H. Corwin Hinshaw, M. D., National Tuberculosis Association Bulletin, July, 1949.

*Issued monthly by the National Tuberculosis Association and furnished through the courtesy of The West Virginia Tuberculosis and Health Association.

The President's Page

The 82nd annual session of our Association is now history. We can thank our hard working Executive Secretary and our Program Committee for its huge success.

Our Association moves forward. In the selection of Dr. Russell B. Bailey, of Wheeling, we have chosen a man who is well trained in the affairs of our organization. Those of us who know him best feel that he will be a strong and progressive president. He not only deserves but enjoys our full confidence.

The policies that were approved and developed by the Council and House of Delegates will assure our continued progress.

The first of these policies was the unanimous approval by the House of Delegates of the A. M. A. assessment and of the state voluntary contribution which had previously been approved by the Council. This action means the vigorous support of our public relations program and a united campaign against socialized medicine.

The second policy was the unanimous approval by the Council and the House of Delegates of a resolution in favor of the establishment of a four-year school of medicine and dentistry in West Virginia. There may be some differences of opinion as to its affiliation, but these can be ironed out if the entire program does not become stymied by some less-needed project, as has been the case during the past forty years. Briefly, we want and need a four-year school of medicine and dentistry in West Virginia.

The third important policy was the approval of a resolution that condemned the practice of medicine by hospitals. This action is not essentially a local or state movement, as it is also a part of a national movement to curb the inroads of our hospitals upon the private practice of medicine.

Changes in our constitution and by-laws to provide for more modern organization of our Association and various other actions which will stimulate our program for better medical care were approved.

Certainly, by these actions we can look forward to greater achievements by our Association, in our campaign against compulsory health insurance, in our fight to provide a complete medical and dental education within our state, and in our efforts to preserve the private practice of medicine.

Thomas G. Reed.

President.

West Virginia Medical Journal

Official Journal of
The West Virginia State Medical Association
302 Atlas Building, Charleston, West Virginia

Editor

Walter E. Vest, M. D. (1951) ..... Huntington

Managing Editor

Mr. Charles Lively ..... Charleston

Associate Editors

W. M. Sheppe, M. D. (1949) ..... Wheeling
Edward J. Van Liere, M. D. (1950) ..... Morgantown
G. G. Irwin, M. D. (1952) ..... Charleston
R. H. Edwards, M. D. (1953) ..... Welch

Editor Emeritus

James R. Blass, M. D. ..... Huntington

Business Manager

Mr. Charles Lively ..... Charleston

Published monthly on the first day of the month, at Charleston, by The West Virginia State Medical Association.

Original articles are accepted on condition that they are contributed exclusively to the Journal.

Advertising rates furnished upon request. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the American Medical Association.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston 24, West Virginia Telephone, Capitol 34-625.

OUR NEW PRESIDENT

The election of Dr. Russell B. Bailey, of Wheeling, as president of the West Virginia State Medical Association is most pleasing to his hundreds of friends in the medical profession and his thousands of admirers all over West Virginia.

The new president is possessed not only of a pleasing, but a dynamic personality. He is a successful surgeon, and for years has been interested in the treatment and control of cancer. Not only is he president of the West Virginia Cancer Society, but also a director of the American Cancer Society.

"Russ," as he is most affectionately known to his many friends, has served as a member of the Council for nearly two years, and has been active in the development of a modern program for public health work in West Virginia. He took an active part in the campaign for the enactment by the legislature of legislation designed to reorganize the state health department along modern lines. And, at the first meeting of the new state board of health, created under the provisions of a bill passed at the 1949 session of the legislature, he was elected chairman.

Russ Bailey is a native West Virginian. He was a model student in his school days at Weston, but had sufficient time to develop into one of the best high school football players in the state. It was the natural thing for him to do to enroll at West Virginia University, where he rose to football heights along with Errat "Rat" Rogers. Everyone who saw the great West Virginia teams of 1918-1919 play will remember Russ Bailey as one of the all-time "greats" among quarterbacks, not only at the University, but in the entire country.

No official All-American team was named by the late Walter Camp in 1919, but he indicated that had such a team been named, Russ Bailey would have been a member.

All of this is just a little aside, and is being written in a reminiscent mood. Since his graduation from the University, Russ has gone far in medicine and surgery, and he "plays the game" in his profession with the same ardor and enthusiasm displayed when football was a pretty considerable part of his life.

He is loved by all who know him, and respected for the place he has carved for himself in his specialty of surgery.

We congratulate Russ upon his election, and have no hesitancy in assuring him of the complete cooperation of all the members of the West Virginia State Medical Association in such plans as he may outline for the progress of medicine in this state.

WHOSE OX IS GORED

We have watched earnestly the British "noble experiment" in socialism, especially the socialization of medicine, and wondered just how the higher-ups would react to it.

Recently, the press dispatches have given us an inkling of what the Chancellor of the Exchequer thinks of state medicine. When he became a victim of indigestion, he rushed off to Switzerland for medical care. This incident stimulated an editorial writer in the Richmond News-Leader to the production of one of the very best lay editorials we have seen on public medicine, and we hope that Mr. Oscar Ewing has "read, marked and inwardly digested" it.

The editorial, which appeared in the issue of the News-Leader for July 26, 1949, is so apropos that we reproduce it in full:

> We read with somewhat mixed feelings that the slightly acidulous look on Sir Stafford Cripps' face is due to a digestive complaint and not an ideological preference for the austerities of Socialism. While extending Sir Stafford our sincere sympathy, we must view his departure on advice of his physicians to undergo special treatment in Switzerland as a sad blow to the prestige of the British Health Plan.
>
> For more than a year now we have been taught to believe that British socialized medicine was all

inclusive, cradle-to-the-grave, womb-to-the-tomb. We have been told that it covered rich and poor, high and low, all the ills their flesh is heir to, and everything from treatments for a simple cold to appendectomies, one to a customer. We have heard that it provides any and everybody with all the outward props that ingenious man has devised to bolster for a little time his inevitably disintegrating body. False teeth — dentures upper and lower, crowns, bridges and pivots — spectacles, glass eyes, artificial limbs, crutches, hearing aids and wigs are all on the house.

We have been told that if an Englishman doesn't like the shape of his nose or the size of his ears, a government plastic surgeon will supply others more to his taste. We have been assured that government psychologists are on tap to cure maladjustment to working environment, that government psychiatrists are at hand for the care of insane aunts.

Goggle-eyed, we have learned that a Briton may have free trips to the seashore and a free pram for the baby by securing a card of a certain color, and that free pills, poultices, plasma or penicillin can be had by the simple expedient of filling out a form.

In fact, we have heard that the amount of ink, red or black, that has been used to operate the British Health Plan for one year staggers the imagination and has almost staggered Britain.

But when the Chancellor of the Exchequer turns up with indigestion, British socialized medicine confesses it is licked. We hope the special treatment in perennially solvent Switzerland will effect a lasting cure.

A SPLENDID MEETING

The White Sulphur meeting has come and gone and left in its wake a flood of pleasant memories. Old friendships were renewed and old friends greeted, occasionally with a tinge of sadness as we beheld here and there a wrinkling visage, a graying head, or a balding pate.

The program was superb; no other word describes it. Modern medicine was presented right up to date. A past president of a sister state society who was present at the meeting made the statement that our program was the best state society program he had ever seen. Several of the visiting participants expressed similar opinions.

The only criticism we heard, and the only legitimate criticism that, in our opinion, could be made, was directed toward the paucity of intrastate participants. It is indeed a function of a state medical society to develop its own membership, but on the other hand the question might be raised as to whether the membership might not be better developed by such programs as the one presented at the Greenbrier than by presentations emanating from within our own confines.

Certainly the scientific content of the presentations could not be questioned, and taken all in all we might well describe the meeting by paraphrasing the last line of Southey's Battle of Blenheim and say

" 'Twas a glorious session."

THE GREENBRIER "TOPS"

There has never been a meeting of the State Medical Association within our memory that was as well organized as the 82nd annual convention at The Greenbrier in August. Even an unexpected last minute rush and crush by members to attend the banquet did not develop into a problem that could not be controlled.

It seems that every minute of every day was planned to the last detail, and the success of the convention is undoubtedly due in a large measure to the cooperation of the management of The Greenbrier. From the formal opening of the convention by Dr. Tom Reed on Thursday morning until the closing remarks by Dr. Will Durant on Saturday evening, the intricate wheels of a big convention moved swiftly and smoothly.

The House of Delegates very properly extended a vote of thanks to The Greenbrier for the cooperation of the entire personnel in making the convention a success. In our humble opinion, no better facilities for a convention can be found anywhere in America.

It appeared to us that the executive officers and all of the personnel went out of their way to assist our own convention officials make the meeting an outstanding success. We have heard nothing but praise for the efficient and courteous services placed at the disposal of our members during the meeting.

It is good news that the House of Delegates voted unanimously to return to The Greenbrier in 1950, and the success of the meeting this year augurs well for a much larger attendance at the convention in July, 1950.

RECORD WORTH READING

The resolutions adopted at the annual meeting at White Sulphur Springs, August 4-6, together with reports of committees submitted to the House of Delegates at that time, are printed elsewhere in this issue of The Journal.

Every member of the West Virginia State Medical Association should read the resolutions and reports in order to obtain first-hand information of the problems of organized medicine in this state and the recommendations that were made by the House of Delegates and various committees with reference to their solution.

INCREASED NEED FOR PSYCHIATRY

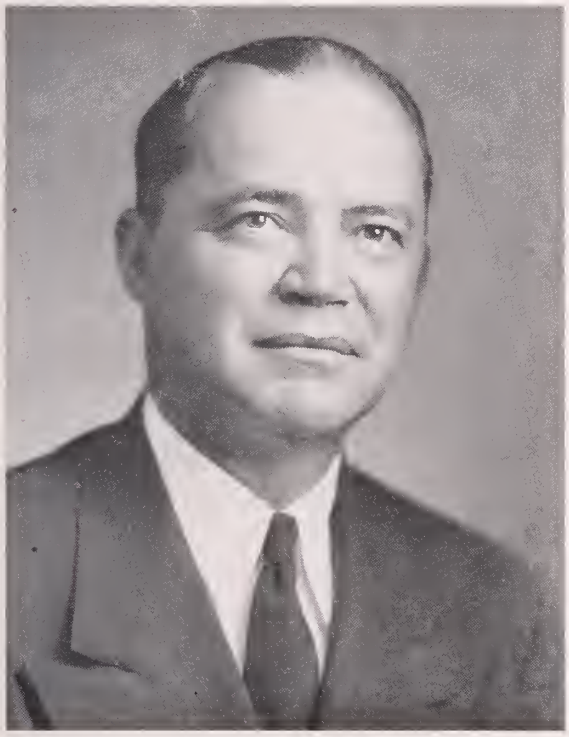
Although preventive medicine has made remarkable progress in all lines of endeavor, its most significant advance in recent years has been the attention that it has given to mental health. Modern society demands that its members live under a tension that is overwhelming, and many have failed to keep the pace required. As standards of living have improved, the need for psychiatry has increased. This is especially true in the very early and very late years of life.—Miriam D. Manning in New England J. Med.

GENERAL NEWS

DR. RUSSELL B. BAILEY, OF WHEELING, NAMED PRESIDENT AT ANNUAL MEETING

Dr. Russell B. Bailey, Wheeling surgeon, was elected president of the West Virginia State Medical Association at the 82nd annual meeting at White Sulphur Springs, August 4-6, 1949. He will succeed Dr. Thomas G. Reed, of Charleston, and will assume his new duties January 1, 1950.

Dr. Charles E. Watkins, of Oak Hill, was elected first vice president to succeed Dr. Fred Richmond, of Beckley. Dr. J. C. Huffman, of Buckhannon, was reelected second vice president. This is probably the first time that a vice president of the Association has been elected to succeed himself. Dr. T. Maxfield Barber, of Charleston, was reelected treasurer for his 23rd consecutive term.



Russell B. Bailey, M. D.

Doctor Bailey was born in Lewis County, near Weston, October 17, 1897, son of Mrs. J. H. Bailey, of Weston, and the late J. H. Bailey. He received his academic education, including two years of medicine, at West Virginia University, graduating from that institution with the degree of A.B. in June, 1920. He received his M. D. degree at the University of Cincinnati in 1922. For the following three years he served an internship and residency at the Long Island Hospital in Brooklyn. He was instructor in surgery at the University Hospital, Ann Arbor, Michigan, 1925-27.

Doctor Bailey became a member of the surgical staff of the Wheeling Clinic in July, 1927. He is a fellow of the American College of Surgeons and a Diplomate of the American Board of Surgery. He is a director of the Americal Cancer Society, and president of the West Virginia Cancer Society. He was elected chairman of the new state board of health at its organization meeting last July.

AMA Delegates and Alternates

West Virginia's two-man delegation in the AMA House of Delegates will be changed in 1950 for the first time since 1938. Dr. George F. Evans, of Clarksburg, present member of the Council from the third district, was elected AMA delegate to succeed Dr. Ivan Fawcett, of Wheeling, who has served as a member since 1938. Dr. Walter E. Vest, of Huntington, is the hold-over delegate from this state.

Dr. James L. Wade, of Parkersburg, was reelected alternate delegate to the AMA. Dr. William P. Black, of Charleston, holds over for another year as alternate delegate.

Councillors

Dr. J. P. McMullen, of Wellsburg, was elected member of the Council from the first district to succeed Dr. Russell B. Bailey, of Wheeling. Five present members of the Council were reelected for a two-year term as follows: Second district, Dr. Fred R. Whittlesey, Morgantown; third, Dr. E. H. Hunter. Webster Springs; fourth, Dr. James S. Klumpp, Huntington; fifth Dr. J. C. Lawson, Williamson; and sixth, Dr. D. C. Ashton, Beckley.

Maternal and Child Welfare

All of the present members of the committe on Child Welfare were reelected.

The new committe on Maternal Welfare will be composed of Drs. M. B. Williams, Wheeling; Charles S. Mahan, Morgantown; J. E. Page, Clarksburg; E. J. Humphrey, Huntington; E. W. McCauley, Bluefield; and W. E. Hoffman, Charleston.

The president elect will name the chairman of the committees on Child Welfare and Maternal Welfare.

BY-LAWS AMENDED

At the first session of the House of Delegates of the West Virginia State Medical Association held at White Sulphur Springs, August 4, the following amendments to the By-Laws, offered at the request of the Council by Dr. Sobisca S. Hall, chairman of the committee on Revision of the Constitution and By-Laws, were unanimously adopted:

Chapter VIII

Section 1. Amend the section by striking out "Fact Finding and Planning Committee" and "Committee on Legislation," and inserting in lieu thereof, "Fact Finding and Legislative Committee"; and, by striking out "Publicity Committee" and inserting in lieu thereof, "Public Relations Committee."

Sec. 4. Amend paragraph (f) to read as follows:

(f) Fact Finding and Legislative Committee. It shall be the duty of the Fact Finding and Legislative Committee to ask for and receive suggestions from the members of the Association; to consider matters affecting the medical profession and make recommendations to the Council and House of Delegates; to conduct a study, conjointly with hospitals and other allied groups, of matters pertaining to the economic, social and similar aspects of medical care for all the people, and suggest means for the distribution of medical service to the public

consistent with the principles adopted by the House of Delegates; and to propose or sponsor such legislation as may be thought necessary to improve the health and welfare of the people of West Virginia, and to oppose any legislation which would tend to lower the standards of medical care or which would be inimical to the public welfare.

Amend paragraph (l) to read as follows:

(l) Public Relations Committee. The Public Relations Committee shall handle all public relations work of the Association, and shall be empowered to communicate to the public, in ethical manner, matters pertaining to scientific advances, medical problems affecting the public, and any other information which will tend to provide better understanding between patient and physician.

Delete all of paragraph (h) and reletter paragraphs (i) to (o) inclusive.

The amendments as adopted had been printed twice in The Journal, and notice had been given all component societies that they would be offered at the annual meeting.

At the same session, Doctor Hall moved that the By-Laws be further amended by deleting all of Sec. 1, Chapter X, which reads as follows:

"The President shall annually appoint an orator in medicine and an orator in surgery, each of whom shall deliver an address at the next annual session."

This amendment was unanimously adopted at the second session of the House of Delegates on August 5.

DOCTOR BARBER AGAIN HONORED

Dr. T. Maxfield Barber, of Charleston, who has served as treasurer of the West Virginia State Medical Association since January 1, 1927, was reelected for his 23rd consecutive term at the annual meeting at White Sulphur Springs, August 4-6, 1949.

Doctor Barber was first elected at the 59th annual meeting at Morgantown in 1926, to succeed the late Dr. Hugh G. Nicholson, who at that time resided in Charleston.

DOCTORS HIGH IN WVU COUNCILS

Three members of the West Virginia State Medical Association hold high office in connection with the governing body and the Alumni Association of West Virginia University. Dr. Thomas L. Harris, of Parkersburg, past president of the Association, assumed office July 1 as president of the University Board of Governors, succeeding A. C. Spurr, of Fairmont. He has been a member of the Board since January, 1945.

Dr. Newman H. Dyer, of Charleston, state director of health, was elected president of the Alumni Association at the annual meeting during Commencement Week. He will serve until June, 1950. Doctor Dyer has served as vice president of the Association during the past year.

Dr. Russell B. Bailey, of Wheeling, is second vice president of the Alumni Association. He was recently elected president of the West Virginia State Medical Association.

HOUSE OF DELEGATES IN BUSY SESSIONS AT WHITE SULPHUR SPRINGS

The House of Delegates of the West Virginia State Medical Association convened at The Greenbrier for the first session Thursday afternoon, August 4, with Dr. Thomas G. Reed, the president, in the chair. The second and final session was held the following afternoon.

The official attendance at the two meetings of the House was unusually heavy. Besides the elected officers and past presidents, the House is composed of 87 delegates. Of this number, 58 members were present at the opening session, and this total swelled to 73 at the second session.

All of the elected officials were in their seats at both sessions. On the first day five past presidents answered the roll call, and ten responded the second day.

FIRST SESSION, AUGUST 4

The House unanimously ratified the action of the Council in asking for the collection of the AMA assessment of $25.00 and the additional state contribution of $25.00 per member for public relations work.

Medical-Dental School

The resolution favoring the construction of a four-year school of medicine and dentistry, which had been adopted by the Council the preceding evening, precipitated a good deal of discussion. The resolution was finally amended by deleting all reference to the creation of a school that might be independent of West Virginia University. As adopted, a strong stand was taken for the establishment of the school as a part of West Virginia University. The matter of site did not enter into the discussion.

Hospital and Medical Service

A Council-sponsored resolution reaffirming the stand previously taken with reference to the definition of what constitutes hospital and medical care was unanimously adopted. In this resolution, the House went on record as disapproving the practice of medicine by hospitals, particularly with reference to pathological, radiological and anesthesia services.

The Council has heretofore defined hospital care as "provision of bed, board, general nursing service, customary surgical dressings and medicine, and other facilities of the institution, not including medical care."

Medical care has been defined as "any procedure or service by a licensed physician and/or his trained personnel operating under his direction and supervision."

Hospital Service Plans

The House also adopted another Council-sponsored resolution recommending that the calendar year be fixed as the fiscal unit of time for hospital service plans instead of the calendar month as now required by regulations of the Insurance Department.

Service in Armed Forces

In another Council-approved resolution adopted by the House, that body went on record as stating its belief that physicians who were deferred from active duty during World War II in order to permit them to complete their medical education owe a debt to the government for obtaining such education without interruption and "without the rigors of active warfare."

The resolution further placed the House on record as recommending that each such physician volunteer for two years' active service in our armed forces or "locate for practice for a like number of years in one of the areas of West Virginia where there is a critical shortage of doctors."

PR Chairman Praised

Dr. Frank J. Holroyd, chairman of the Public Relations Committee, submitted his report, including an itemized statement of receipts and expenses to August 1. The House unanimously adopted a motion of appreciation for "the fine work that has been done by Doctor Holroyd and the members of his committee."

By-Laws Amended

The proposed amendments to the by-laws, merging the Fact Finding Committee with the Legislative Committee, and changing the name of the "Publicity Committee" to the "Public Relations Committee" were unanimously adopted. Another amendment submitted by Dr. Sobisca S. Hall, chairman of the Committee on Revision of Constitution and By-Laws, was adopted at the second session. This amendment deletes provision for the appointment of an orator in medicine and an orator in surgery in connection with each annual session.

Heart Scientific Assembly Affiliated

In another resolution, the House of Delegates accepted the scientific assembly of the West Virginia Heart Association as representative of the Association and as the body to be affiliated under the by-laws. This change was made because, under the reorganization plan of the Heart Association, laymen are admitted to membership on an equal basis with members of the medical profession.

State Blood Bank

A resolution was also adopted by the House favoring the creation of a state blood bank, and empowered the president to appoint a committee of three to study the necessary needs, location and establishment of such a bank. Report of findings are to be made to the Council and such report submitted to component societies for consideration and approval or disapproval.

If a majority of component societies vote in the affirmative, the Council is empowered to establish a blood bank with adequate facilities to supply the needs of the state.

Resolutions Laid on Table

A resolution sponsored by the Fayette County Medical Society, favoring liberalization of health insurance plans so as to include home and office treatment by the physician, particularly in areas from which access to hospital facilities is diffcult, was ordered laid on the table, together with another resolution favoring a change in our state laws to require osteopathic physicians to take the same examination required of doctors of medicine.

It was explained to the House that committees from the State Medical Association and one from the West Virginia Osteopathic Society are now at work trying to reconcile differences so that such a change as advocated may be made with the full support of both groups.

It was reported that the committees expect to complete their work in time for a bill to be introduced at the 51st session of the legislature.

Section on Orthopedic Surgery

The House of Delegates approved the creation of a new section on orthopedic surgery. Favorable action was taken by the Council at a meeting held several months ago.

Permanent Home

The House of Delegates accepted the suggestion of Dr. P. A. Tuckwiller, of Charleston, by unanimously going on record as urging that the Committee on Permanent Home become more active, in the hope that "in the not too distant future we may have adequate headquarters for the State Medical Association."

Doctor Tuckwiller stated that Kanawha Medical Society would consider maintaining a modern library in connection with the headquarters. The House asked that the committee on Permanent Home report to the Council, or at the next meeting of the House of Delegates.

Committee on Hospital Relations

The president was authorized to appoint a committee on hospital relations for the purpose of endeavoring to settle differences which arise between hospitals and the professional staff at the state level.

Reorganization Plan No. 1 Opposed

The House went on record unanimously as opposing Federal Reorganization Plan No. 1, under the provisions of which it has been indicated that a layman would be appointed as head of the new department of health and welfare. It was ordered that report of the action of the House be wired to Senators M. M. Neely and Harley M. Kilgore, and to Senator John L. McClellan, chairman of the Senate Committee on Expenditures in Executive Departments.

(The Taft-Fulbright-Hunt resolution disapproving the plan was adopted overwhelmingly by the Senate Tuesday evening, August 16, by a record vote of 60 to 32. Both Senator Neely and Senator Kilgore are recorded as voting in the negative.)

(It is thought that the defeat of the plan through the adoption of the Taft-Fulbright-Hunt resolution means that no further effort will be made to have the plan adopted at this session of Congress.)

(Lay people from all over West Virginia wired disapproval of the reorganization plan, and it is estimated that nearly 200 such wires were sent to Washington during the first week in August.

SECOND SESSION, AUGUST 5

At the second session of the House on Friday afternoon, August 5, Dr. C. B. Wright, of Huntington, offered an amendment to the constitution which would limit the tenure of ex-presidents as members of the House to three years following the completion of their term of office. This proposed amendment will be acted upon by the House at the annual meeting in 1950.

Operation of Medical Center Approved

Dr. C. A. Hoffman, of Huntington, chairman of the committee on Syphilis, submitted the annual report of

the committee with recommendations that component medical societies study a plan for the investigation of positive serologic reports from private laboratories similar to that which has proven successful in Parkersburg and Wood county. The committee recommended among other things that the distribution of arsenical preparations by the State Department of Health be discontinued after present supplies are exhausted; that every effort be made to continue the operation of the West Virginia Medical Center; and that the necessity of prenatal serologic testing be brought to the attention of all physicians in the state.

The recommendations of the committee were unanimously approved by the House.

WVU Liaison Committee

On motion of Dr. Thomas L. Harris, who is now president of the Board of Governors of West Virginia University, the House authorized the appointment of a liaison committee between the State Medical Association and the Board. Dr. D. A. MacGregor, of Wheeling, and Dr. Frank V. Langfitt, of Clarksburg, were named in the resolution as two members of the committee, and the president was authorized to name the third member.

1950 Annual Meeting

After the annual election of officers and members of the Child Welfare and Maternal Welfare committees, the House voted unanimously to return to the Greenbrier for the 83rd annual meeting in 1950. Subsequently, the Council fixed July 27-29, as the dates for the meeting.

Dr. Gampell Guest Speaker

Dr. Ralph J. Gampell, formerly of Manchester, England, who is now serving a year's internship in a hospital in San Francisco preparatory to applying for licensure to practice in that state, was a guest speaker at the second session of the House of Delegates. His address was timely, interesting and informative, and afforded those present an opportunity to hear a first-hand review of medicine as it is practiced in England today. He urged that everything possible be done to keep socialized medicine out of America.

Resolutions of Thanks

Just before adjournment the House adopted a resolution thanking the management of The Greenbrier for courteous and efficient service, and the Associated Press, the United Press, the Charleston Gazette, and the Charleston Daily Mail for full and complete coverage of the convention.

DR. PAUL WHITE TO ADDRESS OPEN MEETING

The annual fall meeting of the West Virginia Heart Association is scheduled for September 29-30, at Charleston.

Dr. Paul D. White, eminent cardiologist of Boston, will be the guest speaker at an open meeting which will be held at the Charleston High School auditorium, Thursday evening, September 29. His subject will be, "Questions and Answers in Heart Disease."

The scientific session or clinic is scheduled for Friday afternoon, September 30, at the Daniel Boone hotel. The session will be followed by a business meeting and a dinner for physicians and non-physician members of the Association.

STREAMLINED SCIENTIFIC SESSIONS PLEASING TO GUESTS AT CONVENTION

Nearly 350 members of the West Virginia State Medical Association attended the annual meeting at White Sulphur Springs, August 4-6, 1949. To be exact, the registration fee of $10.00 was paid by 341 members.

In addition to the local state group, over twenty-five doctors from other states were present. Guests were registered from as far away as California, and there was enthusiastic approval of the new type of scientific program arranged for the meeting.

Credit Due Program Committee

Much credit is due Dr. Paul H. Revercomb, the chairman, and Drs. John F. Barker and Carl E. Johnson, members of the Scientific Program committee, for arranging a program that seemed acceptable to all of the doctors present.

The idea of presenting papers on related subjects the first two days of the meeting, with panel discussions following, is something new in West Virginia, but the large attendance at all of the sessions is proof of the interest of the members in the new streamlined sessions provided by the committee.

A question and answer period is always popular and the final scientific session on Saturday proved no exception, and many questions were directed to the four speakers who appeared on the program that morning.

Heavy Attendance at Sessions

The attendance at the general sessions, which were held only in the morning, was heavier than at any annual meeting during the past several years, and the section meetings, which were held after lunch, drew an attendance which in many instances taxed the capacity of the rooms where they were held.

Over 400 at Banquet

All records for attendance at annual banquets were broken at the meeting this year. Only 285 reservations had been made for the banquet by Saturday noon. Places were set up for three hundred in the auditorium, but by seven o'clock it was necessary to use every available inch of space for tables and chairs. The capacity of the auditorium at a banquet is supposed to be four hundred, but 415 doctors and their wives and guests were seated when the banquet got under way forty-five minutes late.

It was necessary for thirty-six of those who held tickets for the banquet to have dinner served to them in the main dining room, but they afterwards came into the auditorium for Dr. Will Durant's address. Over 450 people were present for his address.

Doctor Durant Pleases

Doctor Durant seemed to please everybody. His address was one of the finest ever presented at an annual meeting, and many requests for reprints of his speech, "What Are the Lessons of History," have been received at the headquarters offices in Charleston, but no reprints are available from that source.

Woman's Auxiliary Sets Record

An all-time record attendance at annual meetings of the Woman's Auxiliary was set, with 182 active members being registered. The previous record attendance was 162.

The Greenbrier Selected for 1950

The decision of the House of Delegates to return to The Greenbrier for the 1950 meeting is satisfactory to most all of those who attended the meeting this year, and it is expected that a much larger number of members will attend the convention next year, which will be held July 27-29.

RELOCATIONS

Dr. John D. German, of Huntington, has moved to Clintonville, Wisconsin, where he will continue in the practice of his specialty of surgery and gynecology.

* * * *

Dr. James D. Mathias, who has just received his release from the medical corps of the Army, has located for the practice of medicine at Wardensville.

Doctor Mathias received his M. D. degree from the Medical College of Virginia in 1946, having studied medicine as an ASTP student. He served in the medical corps from July, 1947, until May, 1949, and interned at the Charleston General Hospital from April, 1946, to June, 1947.

* * * *

Dr. Ernest Quentin Hall, of Charleston, has accepted appointment as a member of the medical staff of the E. I. du Pont de Nemours Company at Belle, effective July 1. He received his M. D. degree at Northwestern University Medical School in 1947, and interned at Cincinnati General Hospital. He has just recently completed a residency in surgery at Holzer Hospital, Gallipolis, Ohio.

* * * *

Dr. George W. Speed, formerly of Madison, has moved to Mullens where he has taken over the Taylor Hospital, and the name has been changed to Mullens General hospital. He is serving as superintendent and the staff is open. Laboratory and X-ray departments will be opened in connection with the hospital about September 1.

* * * *

Dr. Glenn F. Palmer, who has been located at Madison, has moved to Pine Grove, where he will continue in general practice.

* * * *

Dr. Wyson Curry, a native of Montgomery, has located at Omar, where he will engage in industrial practice.

Doctor Curry served in the Army medical corps, 1942-46, and has been with the hospital division of the USPHS, with the rank of senior assistant surgeon, since his release from the service in 1946.

* * * *

Dr. Delmer J. Brown and Dr. Marion S. Brown, of Parkersburg have moved to Orlando, Florida, where they have accepted appointments on the staff of Florida Sanitarium and Hospital. They will continue the practice of their specialties of internal medicine and obstetrics and gynecology, respectively.

Dr. Delmer Brown served in the Army Medical Corps for five years, being released with the rank of major. He and Dr. Marion Brown have been practicing in Parkersburg since October, 1947.

COUNCIL CLEARS HEAVY CALENDAR AT MEETING AT WHITE SULPHUR SPRINGS

The pre-convention meeting of the Council of the West Virginia State Medical Association was held at the Greenbrier Hotel, White Sulphur Springs, Wednesday evening, August 3, 1949. All members were present with the exception of the chairman, Dr. Thomas Bess, who was at that time ill in Berkeley, California, where he was visiting his daughter, Dr. Elizabeth B. Cannon.

It was ordered by the unanimous vote of those present that flowers and a telegram of sympathy from the Council be sent to Doctor Bess immediately.

Members Honored

Dr. Charles Trueheart Taylor, of Huntington, was elected to honorary lifetime membership, and the following honorary members were nominated for affiliate fellowship in the American Medical Association: Lee Otis Hill, Camden-on-Gauley; Wellington Henry Parker, Braeholm; William G. C. Hill, Moundsville; Harry Greene Camper, Welch; and John Louis McCarty, Berwind.

Short Form Insurance Report

The executive secretary reported that he had consulted with the insurance commissioner concerning the adoption of a standardized short form examination report to be used by all insurance companies licensed to do business in West Virginia. The commissioner had consulted an official of one of the larger life insurance company associations with reference to this matter, and had been told that concerted action such as proposed by the State Medical Association might lead to difficulties with the government under present anti-trust laws.

It was suggested that, at least for the time being, it would be well for companies doing business in West Virginia to adopt for use forms which are best suited for their individual underwriting practices.

The insurance commissioner, it was reported, had suggested that the State Medical Association request the American Medical Association to study the matter of short form reports from a national level, and then endeavor to institute a campaign looking toward the shortening of forms used in all states.

After the matter had been discussed by several of the members, the chairman was directed to appoint a committee for the purpose of preparing a model form of report to be presented to the insurance commissioner with the request that it be adopted as a standard report form for this state for the purpose of shortening the examination report which is required by all life insurance and health indemnity insurance companies doing business in West Virginia.

Increase in Examination Fees

The Council went on record as recommending that positive steps be taken to contact each life insurance and health indemnity company licensed in West Virginia with a view to obtaining an increase in fees for examination.

Renewal of VA Contract

The executive secretary reported that, at the direction of the president, he had polled the Council by mail concerning the renewal of the contract with the

Veterans Administration at Washington, for examination, treatment, and counselling to beneficiaries for the period ending June 30, 1950, and that the poll showed fifteen members in favor of renewal and two against, with one member not voting. It was further reported that, in view of the majority vote for renewal, the president had signed the notice of such renewal and submitted the same to the Veterans Administration at Washington.

The action of the Council in authorizing the renewal of the contract by a poll by mail was ratified.

VA Study Authorized

The president was directed to appoint a special committee to make a full study of Veterans Administration matters in this state and report back to the Council at a future meeting.

Amendment to VA Fee Schedule

The executive secretary reported receipt of a letter from the VA at Washington, requesting that the note in the fee schedule under "occupational therapy and physiotherapy" be amended by deleting the last sentence in the first paragraph at the top of page 26 of the fee schedule, which became effective April 1, 1948, and which is as follows:

> NOTE: Physical therapy and occupational therapy are understood to be treatment rendered by physicians practicing in the field of physical medicine or by physical therapists or occupational therapists who render such treatment on a prescription basis, under the direction of physicians. Authorization for physical therapy and occupational therapy will be issued only to physicians who will in relevant cases pay the physical or occupational therapists."

The matter of the acceptance of the amendment to the fee schedule was ordered referred to the Veterans Board of Review for investigation and report back to the Council at a future meeting.

Service in Armed Forces

Dr. Russel Kessel offered the following resolution which was, on his motion, unanimously adopted:

> "WHEREAS, A critical shortage of doctors exists in the rural sections of West Virginia; and,
>
> "WHEREAS, The Secretary of Defense, Honorable Louis Johnson, has repeatedly publicized the critical need for physicians in the Armed Services and has issued an urgent appeal to young doctors to volunteer for two years' active duty; and,
>
> "WHEREAS, Many young men, now qualified physicians, were deferred from active duty with the armed forces during World War II in order to permit them to complete their medical education, the expense of which, in many instances, was borne by the federal government; and,
>
> "WHEREAS, A large number of these doctors have completed or are now completing their hospital training, and have not offered to serve in our armed forces:
>
> "THEREFORE, BE IT RESOLVED, That the House of Delegates of the West Virginia State Medical Association go on record as stating its belief that these physicians owe a debt to our Government for obtaining their medical education without interruption and without the rigors of active warfare; and
>
> "BE IT FURTHER RESOLVED, That the House of Delegates also go on record as recommending that each such physician volunteer for two years' active service in our armed forces, or locate for practice for a like number of years in one of the areas of West Virginia where there is a critical shortage of doctors."

Medical and Hospital Service

The following resolution offered by Doctor Klumpp at the request of the Cabell County Medical Society was adopted with the understanding that it was to be submitted to the House of Delegates without recommendation:

> "Be it resolved by the Cabell County Medical Society, that our delegates to the State Medical Association be instructed to request the House of Delegates of the State Medical Association, that a resolution be passed, that The Blue Cross Enabling Act be amended to make the fiscal unit of time be the calendar year instead of the calendar month as is now the custom by regulation No. 3113 of the Insurance Commissioner; and that resolutions be passed by the House of Delegates of the West Virginia State Medical Association, defining hospital service and medical service in such terms as will definitely establish a line of demarcation between medical service and Hospital Service."

The following resolution, also offered by Doctor Klumpp was unanimously adopted:

> "WHEREAS, Many of the hospitals of this state are actively engaged in the practice of medicine insofar as they collect fees for pathological, radiologic and anesthesia services and remit but a portion of such fees collected in the form of salaries to medical employees of said hospitals; and,
>
> "WHEREAS, The Council of the West Virginia State Medical Association heretofore, on May 9, 1948, specifically defined what constitutes hospital and medical care:
>
> "THEREFORE, BE IT RESOLVED, That the Council of the West Virginia State Medical Association disapproves the practice of medicine by said hospitals and reaffirms the stand previously taken with reference to the definition of what constitutes hospital and medical care. The executive secretary is directed to report to the House of Delegates the action taken by the Council."

DPA Fees

Doctor Kessel reported to the Council the receipt of a communication from Dr. A. B. Bowyer, secretary-treasurer of the West Virginia Society of Anesthesiologists concerning the exclusion of anesthetists from participation as such in the payment of fees by the Department of Public Assistance for their services. It was ordered that the Council go on record as requesting that the DPA permit physician anesthetists, pathologists and radiologists to make charge for their services.

Four-Year School

The Council amended and adopted the following resolution which was presented by Dr. E. L. Gage for the Mercer County Medical Society:

> "WHEREAS, There is a growing shortage of doctors and dentists in West Virginia; and,
>
> "WHEREAS, Medical and dental schools in other states are gradually closing their doors to out of state students; and,
>
> "WHEREAS, It is clearly the duty of each state to provide medical and dental educational facilities for its students; and,
>
> "WHEREAS, A complete medical school within the state would not only provide undergraduate education but would serve as a medical center for all the doctors in the state; and,
>
> "WHEREAS, Many states with less economic resources have, and successfully operate, four-year medical and dental schools; and,
>
> "WHEREAS, The West Virginia State Medical Association and West Virginia Dental Association made every effort in their power to have the last

legislature of the State of West Virginia establish a four-year medical and dental school as a part of West Virginia University:

"NOW, THEREFORE, BE IT RESOLVED, That the West Virginia State Medical Association go on record as favoring the establishment of a four-year medical and dental school, and that said school be established either as an independent school or as a part of West Virginia University, and that a copy of this resolution be sent to each member of the interim committee set up by the Governor to study this matter."

Depletion Tax

Doctor Bailey reported that natural resources valued at millions of dollars are being marketed from West Virginia each year, and suggested that a tax on the products marketed be levied to provide for the construction and maintenance of a four-year school of medicine and dentistry in this state.

After several members had discussed the matter, it was ordered, that the Council go on record as favoring the levying of a special depletion tax on natural resources to provide funds for a four-year school of medicine and dentistry in West Virginia.

No UMW Fee Schedule

The executive secretary was directed to notify each section and affiliated society that no fee schedule has been set up to cover services rendered to patients under the UMW program, and that no such fee schedule is contemplated at the present time. It was also ordered that this information be passed along to the UMW area medical administrators in West Virginia.

DR. PATTERSON HEADS MCV ALUMNI

Dr. J. L. Patterson, of Logan, was elected president of the West Virginia Chapter of the Medical College of Virginia Alumni Association at a meeting held in connection with the 82nd annual meeting of the West Virginia State Medical Association, August 4, 1949. He succeeds Dr. L. Rush Lambert, of Fairmont.

Short addresses were delivered by Dr. Harvey Haag, dean of the Medical College of Virginia, Richmond, and Dr. R. J. Wilkinson, Huntington, immediate past president of the MCV Alumni Association.

The meeting, which was in the form of a cocktail party, was arranged by Mrs. Helen M. Seller, of Richmond, the assistant secretary.

AAGP IN ST. LOUIS IN FEBRUARY

The 1950 scientific assembly of the American Academy of General Practice will be held at the Kiel Auditorium, in St. Louis, February 20-23. A full three-day program designed for general practitioners will be presented, together with a greatly enlarged technical and scientific exhibit. More than 5,000 general practitioners are expected to attend the meeting.

Room reservations are now being accepted by St. Louis hotels, and all reservations should be cleared through the Hotel Reservation Bureau, A. A. G. P., 1420 Central Trust Building, St. Louis, Missouri

CENTRAL ASSN. OB. AND GYN.

The 18th annual meeting of the Central Association of Obstetricians and Gynecologists will be held December 21-23, 1950, at the Hotel Schroeder, in Milwaukee.

NEW OFFICERS ELECTED BY SECTIONS AND SOCIETIES AT ANNUAL MEETINGS

New officers were elected by several of the sections and affiliated associations and societies at the annual meeting of the West Virginia State Medical Association at White Sulphur Springs, August 4-6, 1949. The following is a list of new officers of sections:

Pediatrics: Archbold M. Jones, Parkersburg, Chairman; and William W. Davis, Parkersburg, Secretary.

Surgery: John C. Condry, Charleston, Chairman; and I. Ewen Taylor, Huntington, Secretary.

Urology: Ray M. Bobbitt, Huntington, President; Clifton J. Reynolds, Bluefield, Vice President; and Charles A. Hoffman, Huntington, Secretary.

Associations and societies elected new officers as follows:

West Virginia Society of Anesthesiologists: John F. Morris, Huntington, President; Newman H. Newhouse, Charleston, Vice President; and Arkie B. Bowyer, Charleston, Secretary-Treasurer.

West Virginia Heart Association: John E. Stone, Huntington, President; Lawrence B. Gang, Huntington, Vice President; Wade H. Rardin, Beckley, Treasurer; and Fred Richmond, Beckley, Secretary (reelected).

West Virginia Obstetrical and Gynecological Society: Charles L. Goodhand, Parkersburg, President; A. Morgan Dearman, Parkersburg, Vice President; and Clarence H. Boso, Huntington, Secretary-Treasurer.

Association of Pathologists of West Virginia: Marshall W. Sinclair, Bluefield, President; and Melford L. Hobbs, Morgantown, Secretary-Treasurer.

PROPOSED AMENDMENT TO THE CONSTITUTION

The following amendment to the Constitution of the West Virginia State Medical Association, offered by Dr. C. B. Wright, of Huntington, at the annual meeting of the House of Delegates at White Sulphur Springs, August 4-6, 1949, will be submitted to the House for final action at the 83rd annual meeting at White Sulphur Springs, July 27-29, 1950:

Article V

Sec. 1. Amend the section to read as follows:

"The House of Delegates shall be the legislative and business body of the Association and shall consist of (1) delegates elected by the component county societies; (2) ex-presidents for a period of three years following their tenure of office; and (3) the president *ex officio*."

(This section now reads as follows: "The House of Delegates shall be the legislative and business body of the Association and shall consist of (1) delegates elected by the component county societies; (2) all ex-Presidents; and (3) *ex-officio*, the President.")

MRS. DANA T. MOORE INSTALLED AS PRESIDENT OF WOMAN'S AUXILIARY

Mrs. Dana T. Moore, of Parkersburg, was installed by Mrs. David B. Allman, president of the Woman's Auxiliary to the A.M.A., as president of the Woman's Auxiliary to the West Virginia State Medical Association at the Silver Anniversary meeting at White Sulphur Springs, August 6, 1949. She will hold office until the next annual meeting at The Greenbrier, July 27-29, 1950.

Mrs. Ross P. Daniel, of Beckley, was named president elect. Vice presidents were elected as follows: First, Mrs. Charles L. Goodhand, Parkersburg; second, Mrs. R. H. Curry, Barboursville; third, Mrs. W. E. Ackerman, Jr., Wheeling; and fourth, Mrs. J. P. Lilly, Charleston.

Mrs. J. H. Murry, of Kimball, was elected recording secretary, Mrs. Paul L. McCuskey, Parkersburg, corresponding secretary, and Mrs. John F. McCuskey, Clarksburg, treasurer.

Mrs. Dana T. Moore

Mrs. Moore was born in Burlington, North Carolina, daughter of William Alfred and Willie Jane Bethea Shoffner. She received her early education in local schools, and then spent two years at Woman's College of the University of North Carolina, and one year in secretarial training. She was married in Richmond, Virginia, April 7, 1925, to Dana T. Moore, who received his M. D. degree from the Medical College of Virginia that same year. They located at Logan, and then moved to Parkersburg, where her husband has since been engaged in practice.

While they lived in Logan, Mrs. Moore served as president of the Omar Woman's Club and the Southwestern District of the West Virginia Federation of Women's Clubs. Always active in the work of the Auxiliary, she has served as president of both the Logan County Auxiliary and the Auxiliary to the Academy of Medicine of Parkersburg.

She has served two years as recording secretary and one year as fourth vice president of the Woman's Auxiliary to the West Virginia State Medical Association. She was named president elect in 1948, and has been active in organization work during the past year.

Standing Committees

The following chairmen of standing committes were named for the ensuing year:

Archives, Mrs. Herbert Beddow, Charleston; Exhibits, Mrs. R. W. Corbitt, Parkersburg; Finance, Mrs. Gilbert Ratcliff, Huntington; Historian, Mrs. Edward W. Hickson, Fairmont; Hygeia, Mrs. W. C. Boggs, Wheeling.

Legislation, Mrs. W. E. Hoffman, Charleston; Necrology, Mrs. F. Carl Chandler, Bridgeport; Organization, Mrs. Ross P. Daniel, Beckley; Parliamentarian, Mrs. U. G. McClure, Charleston; Program, Mrs. L. D. Norris, Fairmont.

Editor of News Bulletin, Mrs. R. H. Boice, Parkersburg; Press and Publicity, Mrs. A. M. Jones, Parkersburg; Circulation Manager, Mrs. R. S. Widmeyer, Parkersburg; and Revisions, Mrs. O. H. Brundage, Parkersburg.

Special Committees

Bulletin, Mrs. C. G. Power, Martinsburg; Speakers Bureau, Mrs. R. S. Van Metre, Huntington; Credits and Awards, Mrs. D. E. Greeneltch, Wheeling.

Nurse Recruitment, Mrs. T. U. Vermillion, Beckley; Southern Medical, Mrs. Ralph S. McLaughlin, Charleston; Special Projects, Mrs. Ralph Hogshead, Montgomery; and Public Relations, Mrs. L. D. Zinn, Clarksburg.

Attendance Records Broken

All records for attendance at an annual meeting were broken this year. When the registration books were closed on Saturday, 182 members of the Auxiliary had been recorded as being present. The highest previous record attendance was 162.

Kanawha Wins Award

The award for extent of activities and completion of projects in Woman's Auxiliary work was won this year by the Kanawha Auxiliary, which achieved a rating of one hundred per cent. The award, given annually by the State Auxiliary, was made by Mrs. T. U. Vermillion, of Beckley, chairman of the Committee on Credits and Awards, at the close of the annual meeting on August 5.

WOMAN'S AUXILIARY ADVISORY COMMITTEE

Dr. Thomas G. Reed, president of the State Medical Association, has appointed the following as members of the Woman's Auxiliary Advisory Committee:

Dr. Elizabeth McFetridge, Shepherdstown, chairman; Dr. W. A. Thornhill, Charleston; Dr. Frank J. Holroyd, Princeton; Dr. Paul L. McCuskey, Parkersburg; and Dr. E. H. Starcher, Logan.

DR. C. E. WATKINS WINS PERMANENT POSSESSION OF GOLF TROPHY

The golf and tennis tournaments, held in connection with the 82nd annual meeting of the West Virginia State Medical Association, at The Greenbrier, White Sulphur Springs, August 4-6, 1949, drew more contestants than any similar events held at any previous annual meeting.

The results of the golf tournament, as reported by the chairman, Dr. James S. Klumpp, are as follows:

Championship trophy: Won by Dr. Charles E. Watkins, of Oak Hill, who turned in a score of 69, one under par. Other awards were made as follows: Low net, Dr. J. Paul Aliff, of Charleston; low putts, Dr. R. O. Halloran, of Charleston; most 5's, Dr. David L. Ealy, of Moundsville; and blind bogey, Dr. James S. Klumpp, of Huntington.

NEW TROPHY

The Kloman Instrument Company, Inc., of Charleston, has presented the West Virginia State Medical Association with another beautiful silver "championship cup," which will be awarded annually to the winner of the medical golf tournament, held in connection with annual meetings.

Permanent possession of the trophy will be retained by the member who first wins it at three separate meetings.

The championship cup, which was won by Dr. Watkins, was presented several years ago by the Kloman Instrument Company, Inc., of Charleston. Dr. R. R. Summers, of Charleston and Doctor Watkins each had two "legs" on the trophy, and by winning the 1949 tournament, Doctor Watkins was awarded permanent possession of the cup.

Tennis Matches

The singles matches in the tennis tournament could not be completed at White Sulphur, but will be played off at a later date between Dr. Robert M. Biddle, of Parkersburg, and the chairman of the tennis tournament, Dr. John Lutz, of Charleston.

Dr. O. Terry Caulfield, of New Martinsville, and Doctor Lutz were the winners of the doubles matches, and Dr. Spencer L. Bivins, and Dr. Bert Bradford, Jr., both of Charleston, were runners-up.

Auxiliary Golf and Tennis

Mrs. Russel Kessel, of Charleston, served as chairman of the Auxiliary golf tournament committee. Mrs. John F. McCuskey, of Clarksburg, won the championship trophy, turning in an 82 for the eighteen holes. Mrs. Dana T. Moore, of Parkersburg, was awarded the second prize for a low score of 95.

There were no singles matches in the Auxiliary tennis tournament. Mrs. Ralph J. Jones and Mrs. Bert Bradford, Jr., both of Charleston, won the doubles championship, and Mrs. W. A. Thornhill, of Charleston, and Mrs. Robert M. Biddle, of Parkersburg, were the runners-up.

INDEPENDENT STUDY AUTHORIZED FOR MEDICAL-DENTAL SCHOOL

Dr. Alan A. Gregg, director of medical science for the Rockefeller Foundation, and Dr. Herman G. Weiskotten, dean of Syracuse University College of Medicine and chairman of the AMA Council on Medical Education and Hospitals, have been asked to conduct separate surveys concerning the advisability of building and maintaining a four-year school of medicine and dentistry in West Virginia.

The request for the survey was made by the legislative interim committee, in consultation with the citizens advisory committee, set up by the 1949 legislature for the purpose of studying the whole medical school question. The meeting of the two groups on August 8 followed closely the adoption by the House of Delegates of the West Virginia State Medical Association of a resolution favoring the establishment of the school as a part of West Virginia University. This resolution was adopted at the annual meeting at White Sulphur Springs, August 4-5.

The question of site for the proposed school was not raised by either the State Medical Association's House of Delegates or at the meeting of the interim groups.

The legislative interim committee will meet with the advisory committee when the proposed impartial surveys have been completed. The groups will submit a report to Governor Patteson prior to the conveninig of the next regular session of the legislature in January 1951.

STATE BLOOD BANK

Dr. Harry Thomas, of Clarksburg, has been appointed chairman of a special committee to make a study of the necessary needs for and the location and establishment of a state blood bank. The other members of the committee are Dr. Hu C. Myers, of Philippi,and Dr. W. J. G. Putschar, of Charleston.

The committee was appointed late in August by Dr. Thomas G. Reed, president of the State Medical Association, under authority granted to him in a resolution unanimously adopted by the House of Delegates at the annual meeting at White Sulphur Springs, August 4-6, 1949.

PG COURSE IN DISEASES OF THE CHEST

The Council on Postgraduate Medical Education and the New York Chapter of the American College of Chest Physicians are sponsoring a postgraduate course in diseases of the chest at the Hotel New Yorker, in New York City, November 14-18, 1949.

The course is being offered with the cooperation of members of the staffs of the New York City medical schools and hospitals.

Schedules of instruction include sessions each morning and afternoon, beginning Monday, November 14. The registration fee is $50.00, and the number of registrants for the course is limited. Qualified veterans will receive a refund of fees in the amount approved by the Veterans Administration when such approval is received by the American College of Chest Physicians.

Copies of the program may be obtained by writing to the ACCP, 500 N. Dearborn St., Chicago, Ill.

INCREASE IN POLIO, BUT DISEASE NOT CONSIDERED IN EPIDEMIC STAGE

Poliomyelitis cases in 1949, reported to the state department of health through August 6, totaled 112. Although this is a decided increase over the same period last year, when 39 cases were reported to the department, as yet it is not considered in an epidemic stage.

While the frequency of the disease is increasing, the fatality rate is being lowered. Last year, through June, one death from poliomyelitis in 7 cases was reported to the state health department. Only two deaths resulted from this cause out of 28 cases for the same period this year. According to Dr. N. H. Dyer, state director of health, this might be due to the disease becoming less virulent or because better methods of treatment have been devised.

According to the cases reported, no one area has had a high concentration of the disease, 29 of the 55 counties having reported one or more cases. Kanawha county had the highest incidence with 17 cases; Fayette was second with 14; Logan, 10; Calhoun 9; Raleigh 8; Berkeley 7; Boone and Greenbrier six each; Nicholas 4; Harrison, Webster, and Wyoming three each; Cabell, Clay, Morgan, Ohio, and Randolph two each; and Hampshire, Hardy, Jackson, Jefferson, Lewis, Lincoln, McDowell, Marion, Mercer, Mingo, Monongalia, and Upshur one each.

July, August and September are peak months for polio. Of the total to date, 90 cases have been reported since the first of July. According to the present rate of increase it is possible the total number of cases for 1949 will range from 300 to 400. The largest number of polio cases reported to the state health department for a single year was in 1940 when 662 cases occurred.

While this year's increase in cases of polio is not to be taken lightly it is not a leading killer among the communicable diseases. In 1948, of the deaths from communicable diseases reported, polio was in 9th position, and in 12th place in the principal causes of death reported for children up to 14 years of age.

According to a survey made of a polio epidemic in Maryland in 1941, about 50 per cent of the polio cases that occurred left no after-effects, another 29 per cent left slight after-effects, and 18 per cent marked effects. There was a 3 per cent fatality.

Several diseases leave more serious after-effects than polio. Rheumatic fever often causes irreparable damage to the heart, while such a communicable disease as measles may leave serious secondary effects on other vital organs.

Patients with polio are admissible to a general hospital provided appropriate isolation precautions are employed. No special isolation or "pest" facilities are necessary. The isolation procedures used for the care of acute polio patients are similar to techniques used in the hospital care of other communicable diseases.

Patients may be cared for at home if home facilities and medically supervised care are adequate, or may be discharged to such home when there is no medical indication for further observation or treatment in the hospital.

Last June, the National Foundation for Infantile Paralysis sponsored a Conference on Recommended Practices for the Control of Poliomyelitis. The purpose of the Conference was to consider the major problems relating to control of poliomyelitis and recognized as especially serious. The material was prepared to answer the needs frequently expressed by health officers, hospitals, physicians, and others for up-to-date, authoritative reference and guide for meeting practically the many problems related to the control of poliomyelitis. Mimeographed copies of this report may be obtained by writing to the State Department of Health, Charleston 5, West Virginia.

WILL STUDY VA AFFAIRS IN STATE

Dr. James S. Klumpp, of Huntington, has been appointed by Dr. Thomas G. Reed, president of the State Medical Association, as chairman of a special committee to make a full study of Veterans Administration affairs in this state. The other members of the committee are Drs. Jacob C. Huffman, of Buckhannon, and John C. Condry, of Charleston.

The appointment of the committee was authorized by the Council at the pre-convention meeting held at White Sulphur Springs, August 3, with the understanding that a report is to be submitted at some future meeting.

HOSPITAL RELATIONS COMMITTEE

A special committee on hospital relations authorized by the House of Delegates at the annual meeting at White Sulphur Spjrings, August 4-6, has been named by Dr. Thomas G. Reed, president of the State Medical Association.

Dr. Robert J. Wilkinson, of Huntington, is chairman, and the other members are Drs. Cecil O. Post, of Clarksburg, and Robert J. Reed, Jr., of Wheeling.

The object of the committee is to attempt to settle the differences which arise between hospitals, hospital managements, and the professional staff at the state level, providing these controversies cannot be settled at the local county level under the broad general principles of the Code of Ethics of the American Medical Association.

OVER 1500 DOCTORS REGISTERED

Over 1500 applications for biennial registration under the new registration law for doctors have been returned to the state health department. Of the number received, forty-one have been registered on a retired basis.

August 31 is the deadline for the return of applications, but in the future July 1 will be the deadline for biennial registration. Extension of time was necessary this year, as the law did not become effective until July 1.

ACS CLINICAL CONGRESS IN CHICAGO

The 35th Clinical Congress of the American Congress of Surgeons will be held at the Stevens Hotel in Chicago, October 17-21, 1949.

The Sixth Inter-American Congress of Surgery will meet as a part of Clinical Congress, October 17-21. Dr. Hu C. Myers, of Philippi, is a member of the advisory committee on Inter-American Relations.

EARLY 19th CENTURY MEDICAL JOURNALS

Dr. John B. Grove, of Petersburg, has presented to the library of the West Virginia State Medical Association copies of four rare medical journals, which have been accepted, appropriately marked as a gift, and placed on the shelves in the library at the headquarters offices in Charleston.

One is a copy of the American Medical Recorder for April, 1822, which was published by James Webster, in Philadelphia. It contains original papers on delirium tremens, a smallpox epidemic in Baltimore, weather and diseases, and fractures of the thigh.

A copy of the Journal of Foreign Medical Sciences and Literature, dated October 1, 1822, published by E. Littell, of Philadelphia, contains selected papers on asphyxia and softening of the brain. The cover shows that the subscription price of this Journal was $4.00 per annum.

Another interesting copy of an old medical journal is the February, 1830, issue of the American Journal of Medical Sciences, published by Carey & Lea, in Philadelphia. This Journal contains illustrations in color which retain their colors even after 119 years. There are papers on Excision of the Cervix Uteri, the Use of Pyroligneous Acid in the Treatment of Gangrene, and an original paper by Dr. J. P. Hopkinson on Lithontripty. There is a section on physiology, one on surgery, and one on midwifery.

The fourth pamphlet is Carpenter's Annual Medical Advertiser for 1836, "published and distributed gratuitously to the physicians of the United States, containing a descriptive account of the most popular of the new medicines."

Changes in the personnel of the medical department at the University of Pennsylvania are announced, and there are original articles on the best means of obviating the effects of poisons, and methods and advances in certain baths. Medical chests are outlined for the practicing physician, for large families in cities and in rural areas, and for packing in saddle bags.

A description of several compounds with directions for use is also included, together with a list of drugs and medicine "which should be purchased by a country storekeeper."

PROGRAM COMMITTEE FOR 1950

Dr. James P. McMullen, of Wellsburg, has been named by Dr. Russell B. Bailey, president elect of the West Virginia State Medical Association, as chairman of the scientific work (program) committee. The other members are Dr. Richard E. Flood, of Hollidays Cove, and Dr. E. J. Van Liere, of Morgantown, dean of the School of Medicine of West Virginia University.

This committee will arrange the scientific program for the 83rd annual meeting of the Association, which will be held at White Sulphur Springs, July 27-29, 1950.

NEGRO PHYSICIAN ELECTED AMA DELEGATE

Dr. George F. Lull, of Chicago, secretary and general manager of the American Medical Association, has extended an invitation to Negro physician members of the National Medical Association to attend clinical sessions of the AMA at its annual mid-winter meeting in Washington, December 6-9, 1949. The invitation was tendered in an address before the annual convention of the National Medical Association in Detroit, August 9.

For the first time since its founding 103 years ago, the AMA will, at its annual meeting in San Francisco in June, 1950, seat a Negro physician in the House of Delegates. He is Dr. Peter M. Murray, of New York City, who was recently elected a delegate from New York by the State Medical Society.

Doctor Murray is a native of New Orleans, and received his M. D. degree at Howard University in 1914. He is director of the department of gynecology at Harlem Hospital, and associate director of obstetrics and gynecology at Sydenham Hospital, New York City. He is a trustee of Howard University, and served as president of the National Medical Association, 1930-31.

For the past twelve years, Doctor Murray has been a member of the House of Delegates of the Medical Society of the State of New York.

SOUTHERN TUBERCULOSIS CONFERENCE

The annual meeting of the Southern Tuberculosis Conference will be held at the Peabody hotel in Memphis, Tennessee, September 15-17, 1949. The theme of the entire meeting will be, "Is Tuberculosis Under Control."

A copy of the program for the meeting may be obtained from Mr. Frank W. Webster, secretary-treasurer, Raleigh, North Carolina.

SOUTHERN MEDICAL AT CINCINNATI

The scientific program for the annual meeting of the Southern Medical Association, at the Netherland Plaza, in Cincinnati, November 14-17, 1949, is being completed and will be available by the latter part of September.

The program will begin with two general clinical sessions on Monday afternoon, November 14, one a general medical, and the other a general surgical session. Dr. Oscar B. Hunter, president of the Association, is arranging the program for these two sessions.

Section programs will begin on Tuesday morning, November 15, and continue through Thursday. There will be more section meetings this year than at any time during the past several years, six sections meeting simultaneously each morning and afternoon. There will be but one night session, and that will be President's Night on Wednesday, November 16.

Hotel reservations will be cleared through a hotel committee set up by the host society, the Campbell-Kenton County (Kentucky) Medical Society. Dr. Robert L. Biltz, of Newport, is president of this society, and Dr. Raymond H. Weaver, of Fort Thomas, secretary.

Resolutions Adopted

The following resolutions were adopted by the House of Delegates at the 82nd annual meeting of the West Virginia State Medical Association at The Greenbrier, White Sulphur Springs, August 4-6, 1949:

---

1. By E. L. Gage, M. D., Bluefield: Four-Year School of Medicine and Dentistry.

WHEREAS, there is a growing shortage of doctors and dentists in West Virginia; and,

WHEREAS, medical and dental schools in other states are gradually closing their doors to out of state students; and,

WHEREAS, it is clearly the duty of each state to provide medical and dental educational facilities for its students; and,

WHEREAS, a complete medical school within the state would not only provide undergraduate education but would serve as a medical center for all the doctors in the state; and,

WHEREAS, many states with less economic resources have, and successfully operate, four-year medical and dental schools; and,

WHEREAS, the West Virginia State Medical Association and the West Virginia State Dental Society made every effort in their power to have the last legislature of the State of West Virginia establish a four-year medical and dental school as a part of West Virginia University:

NOW, THEREFORE, BE IT RESOLVED, That the West Virginia State Medical Association go on record as favoring the establishment of a four-year medical and dental school, and that said school be established as a part of West Virginia University, and that a copy of this resolution be sent to each member of the interim committee set up by the Governor to study this matter.

---

2. By James S. Klumpp, M. D., Huntington: Hospital and Medical Care.

WHEREAS, many of the hospitals of this state are actively engaged in the practice of medicine insofar as they collect fees for pathological, radiological and anesthesia services and remit but a portion of such fees collected in the form of salaries to medical employees of said hospitals; and,

WHEREAS, the Council of the West Virginia State Medical Association heretofore, on May 9, 1948, specifically defined what constitutes hospital and medical care:

THEREFORE, BE IT RESOLVED, That the Council of the West Virginia State Medical Association disapproves the practice of medicine by said hospitals and reaffirms the stand previously taken with reference to the definition of what constitutes hospital and medical care.

The executive secretary is directed to report to the House of Delegates the action taken by the Council.

3. By James S. Klumpp, M. D., Huntington, for the Cabell County Medical Society: Hospital Service Plans.

Be it resolved by the Cabell County Medical Society, that our delegates to the State Medical Association be instructed to request the House of Delegates that a resolution be passed, that The Blue Cross Enabling Act be amended to make the fiscal unit of time the calendar year instead of the calendar month as is now required by Regulation No. 3113 of the Insurance Commissioner; and that resolutions be passed by the House of Delegates of the West Virginia State Medical Association defining hospital service and medical service in such terms as will definitely establish a line of demarcation between medical service and hospital service.

---

4. By Russel Kessel, M. D., Charleston: Service of Doctors in Armed Forces.

WHEREAS, A critical shortage of doctors exists in the rural sections of West Virginia; and,

WHEREAS, The Secretary of Defense, Honorable Louis Johnson, has repeatedly publicized the critical need for physicians in the Armed Services and has issued an urgent appeal to young doctors to volunteer for two years' active duty; and,

WHEREAS, Many young men, now qualified physicians, were deferred from active duty with the armed forces during World War II in order to permit them to complete their medical education, the expense of which, in many instances, was borne by the federal government; and,

WHEREAS, A large number of these doctors have completed or are now completing their hospital training, and have not offered to serve in our armed forces:

THEREFORE, BE IT RESOLVED, That the House of Delegates of the West Virginia State Medical Association go on record as stating its belief that these physicians owe a debt to our Government for obtaining their medical education without interruption and without the rigors of active warfare; and,

BE IT FURTHER RESOLVED, That the House of Delegates also go on record as recommending that each such physician volunteer for two years' active service in our armed forces, or locate for practice for a like number of years in one of the areas of West Virginia where there is a critical shortage of doctors.

---

5. By Harry V. Thomas, M. D., Clarksburg, for Harrison County Medical Society: State Blood Bank.

WHEREAS, there now exists inadequate blood bank facilities in the State of West Virginia; and,

WHEREAS, the State of West Virginia is potentially an industrial state exposed to possible disasters requiring great need for adequate blood bank facilities; and,

WHEREAS, such facilities can best be administered and the problems thereunto solved by the medical profession; and,

WHEREAS, under the medical profession a great service can be rendered to the public, hospitals, and the profession; and,

WHEREAS, a blood bank can be established at a minimal cost by the West Virginia medical profession:

NOW, THEREFORE, BE IT RESOLVED: That

1. The House of Delegates of the West Virginia State Medical Association go on record as favoring the creation of a state blood bank and that the president of the Association be empowered to name a committee of three to study the necessary needs, location, and establishment of said blood bank and to report to the Council its findings, such findings to be presented to the component societies by their delegated representatives; and,

2. That, upon receipt of the above report of the component county societies, such societies shall, after full discussion and consideration of the problems involved by the component societies, voice their approval or disapproval of such a project; and

3. That, upon a favorable vote of a majority of the county medical societies, the Council shall be empowered to establish a blood bank with adequate facilities to supply the State of West Virginia.

---

6. By Russell B. Bailey, M. D., Wheeling, for the Council and the Ohio County Medical Society: New State Health Department Bureau.

The Ohio County Medical Society, realizing the high cost of hospital care and the shortage of hospital beds, appreciating the fact that degenerative diseases are on the increase due to the increased life expectancy, and feeling that something has to be done to alleviate this problem, submits the following resolution:

I. The Ohio County Medical Society believes that there is a great deal of merit in the establishment of a bureau in the State Health Department which will be charged with the responsibility of coordinating the programs of the various tax-supported and voluntary agencies in this state to the end that duplication of effort and red tape be reduced to a minimum.

II. The Ohio County Medical Society believes that a home education and service program for the home care of the chronically ill in urban and rural districts can be developed under the leadership of the various city, county, and district divisions of the State Health Department which will go a long way to cut down the cost of hospital care and relieve in a measure the shortage of hospital beds.

III. Such a program to be developed on a fee for service basis, utilizing the personnel already educated in the care of the sick and in the cases of the indigent and medically indigent, this fee for service to be paid for by the tax-supported agencies charged with such care.

IV. Such a program to be endorsed and supported by the Council and House of Delegates of the West Virginia State Medical Association. To that end the Ohio County Medical Society feels that if such a program is endorsed by the State Medical Association it will give an impetus and incentive for the newly organized State Health Department to set up such an administrative division. The Ohio County Medical Society believes that the State Health Department is the agency in the state of West Virginia which is responsible for the health of its people and is the logical agency to spearhead and bring about the collaboration and cooperation necessary for such a program.

ANNUAL REPORTS*

COMMITTEE ON CHILD WELFARE

During the past year, this committee has reviewed data of the study of Child Health Services in West Virginia, compiled under the sponsorship of the American Academy of Pediatrics.

The final report of the study, which contains factual materials, and in which recommendations resulting from the study are made, will be published in the near future.

It is recommended by the committee that the (Study) Report of Child Health Services in West Virginia be accepted as the basis for future activity by the Child Welfare Committee of this Association.

It is asked that the publication committee approve the publication in The Journal of the entire report of this study. It is thought that the greater part of expenses of publication can be borne by the West Virginia Study Committee.

Respectfully submitted,

Russell C. Bond, M. D.,
Chairman
Henrietta L. Marquis, M. D.
Raymond Sloan, M. D.
Carl E. Johnson, M. D.
Harlow Connell, M. D.
A. A. Shawkey, M. D.
Theresa O. Smith, M. D.

PUBLIC RELATIONS COMMITTEE

In November, 1948, the House of Delegates of the American Medical Association, at the Interim Session in St. Louis, decided to ask each member of the American Medical Association for $25.00 with which to defray the expenses of a national educational campaign. Believing that the work could best be done at the "grass roots" level, the president of each state medical association was requested to appoint a state public relations committee.

Our president, Dr. Thomas G. Reed, asked the Publicity Committee to handle this job, and the Council appealed to each member to pay a "state voluntary contribution" of $25.00 to carry on the work at the state level.

A meeting of the chairmen of state committees and executive secretaries of the state medical associations and societies was held at Chicago, February 12, 1949, at which time the campaign was outlined by Whitaker and Baxter and various members of the AMA staff. This meeting was attended by Mr. Charles Lively, Executive Secretary, and the Chairman of this Committee.

Following this meeting, the president of each component society was requested to appoint the most able man in his society as chairman of a public relations

*Other reports were published in the August, 1949, issue of the West Virginia Medical Journal.

committee. Action was prompt on the part of all county medical society presidents, and the committees, with an active, progressive chairman in charge, were ready to go to work by the latter part of February.

On February 27, a meeting of the county PR chairmen, secretaries, and other interested officials was held in Charleston, at which time the plan of the campaign was explained. Dr. J. T. T. Hundley, of Lynchburg, Virginia, presented a very interesting paper on mistakes doctors make as individuals in public relations. A mimeographed copy of his talk was mailed to each member of the State Medical Association. Since this time our State PR Committee has had five meetings, the last one being with the county PR chairmen.

Activities of Committee

The Committee sponsored a Conference on Medical Care at Jackson's Mill, which was attended by the heads of 67 lay and professional groups. A transcript of the proceedings was printed and distributed to all those who attended the meeting. We believe the foundation has been laid for the organization of a permanent committee of professional and lay leaders on medical care in West Virginia.

Your Committee has distributed 450,000 pieces of educational material, and 500 small and 75 large posters of "The Doctor"; published a monthly public relations letter; distributed the Lull and Hawley broadcast throughout the state; co-sponsored lay meetings at Charleston, Parkersburg and Clarksburg; and furnished speakers to all interested groups, doctors or laymen.

West Virginia ranks second in the total number of resolutions adopted throughout the country. A total of 94 resolutions condemning socialized medicine have been sent to the Committee Chairman, and there are doubtless many more that have not been sent to us.

Assessment Paid by 896 Members

As of this date (July 21, 1949), 896 members of the West Virginia State Medical Association (64 per cent of the total membership) have paid the AMA assessment of $25.00 each. A total of $22,400 has been collected for this purpose, and the entire amount has been remitted to the AMA.

Including the twenty-nine remittances that have been made directly to Chicago, 66 per cent of our members are recorded as having paid the AMA assessment. According to Dr. George F. Lull, secretary and general manager of the AMA, West Virginia is seventeenth among the 53 constituent societies in the collection of the assessment.

State Contribution

As of July 21, 1949, 817 members have paid the state voluntary contribution of $25.00, and one member has paid the sum of $10.00. This total of 818 represents 58 percent of the membership. Collections of the state voluntary contribution total $20,435. The members of the West Virginia State Medical Association have paid a combined total of $42,835 for the AMA assessment and the state voluntary contribution.

Receipts and Expenditures

Expenses of the Public Relations committee to and including July 21, 1949, total $3,323.52, leaving a balance of $17,111.48 on hand as of that date.

Major items of expense are as follows:

Total expenses of meeting of members of state and county PR committees and other State Medical Association officials, held at Charleston, March 3, 1949	$ 549.17
Expenses of mimeographing and mailing PR News Letters, bulletins, letterheads, envelopes, letters and the record of the PR meeting held at Jackson's Mill, May 21, 1949	1,482.68
Office expenses, including salary of stenographer	340.56
Contribution of $50.00 each to Kanawha Auxiliary, Harrison County Medical Society, and Parkersburg Academy to help defray expenses of PR open meetings held in each city	150.00
Kiwanis International, for 100,000 Kiwanis folders opposing compulsory health insurance, distributed to members	350.00
Expenses of PR luncheon at Jackson's Mill	170.35
Amount paid court reporter for reporting meeting and transcribing proceedings, mimeographed and sent to the more than 50 persons present	105.90
Postage, telephone and telegrams	145.50
Miscellaneous	29.36
TOTAL	$3,323.52

The Committee wishes particularly to thank Mrs. Charles L. Goodhand, of Parkersburg, who, as Chairman of the Women's Auxiliary Committee on Public Relations, has done such a wonderful job. To thank Mr. Charles Lively, our Executive Secretary, is superfluous—everyone knows that he is the guiding genius behind everything that is done in the West Virginia State Medical Association.

Respectfully submitted,

FRANK J. HOLROYD, M. D.,
Chairman,
R. J. CONDRY, M. D.,
JAMES S. KLUMPP, M. D.,
R. D. GILL, M. D.,
ATHEY R. LUTZ, M. D.

COMMITTEE ON PRESIDENT'S ADDRESS

It is the opinion of your committee that the address of our President, Dr. Tom Reed, is one of the best ever presented to our Association. His historical approach was very unique in establishing our heritage and reaching the conclusion that "truly our heritage is great."

His review of the fundamentals and the function of the principles of medical ethics was very timely, particularly his admonition to clean house of all the misfits in our profession and to "stop, take stock and evaluate ourselves in the light of public opinion."

We particularly commend Doctor Reed for his intrinsic approach to the public relations program, beginning with the more careful selection of the student entering medical school and the house cleaning of our profession of the undesirables who are already engaged in the practice of medicine. He pointed out the

necessity of teaching medical ethics in our medical schools and continuing through the intern and resident years by our hospital staffs.

His second phase of this public relations program would serve to allay a great deal of the criticism of our present practice, i. e., complete medical service throughout the twenty-four hours through county society plans.

The third phase of his public relations program is to provide a "sound, positive and progressive medical care plan." The basis of this plan should be voluntary insurance that will not only provide for hospital and medical care but also provide for the loss of wages during a catastrophic illness of the wage earner. It should also provide not only for complete care and diagnostic service in the hospital but also for diagnostic procedures by qualified physicians in their offices.

His criticism of the present insurance plans was very well taken, and his admonition that "if this hospital control is continued or extended it will prove as great a hazard to the freedom of the practice of medicine as compulsory health insurance" was very timely.

He approved the new type of insurance, that of the United Mine Workers Welfare and Retirement Fund as it is now managed and believes it is the solution of the evils of the list hospital practice that has been in effect for many years in the coal fields.

He approached the problem of rural health from the educational standpoint and recommended full-time public health units, the development of clinics and diagnostic centers and the subsidization if necessary of physicians to practice in these areas.

The problem of medical education was considered and the establishment of a full-time medical school was proposed as a solution for many of the ills of practice in our state. Doctor Reed pointed out the need for 800 more physicians in our state and the necessity of providing complete medical education within our own state if this pressing problem is to be solved satisfactorily.

His conclusion is summed up in his statement that "our Association is at the cross roads. We can go forward to greater advancement with freedom, or we can be the slaves of an all powerful state."

His whole address was very courageous and frank. He posed the problems as they are, and placed the blame where it should be, for the most part upon ourselves. All in all, it was one of the most timely and satisfying presidential addresses we have ever heard.

Respectfully submitted,

J. L. Patterson, M. D.,
Chairman
W. T. Gocke, M. D.,
John W. Hash, M. D.

REPORT OF EXECUTIVE SECRETARY

The past year was one of the busiest in the entire history of the Association. An ambitious legislative program, coupled with work incident to the beginning of nationwide and statewide public relations programs, resulted in a heavy daily work calendar at the headquarters offices in Charleston.

Frequent meetings of the Council and of our active committees have been held, particularly the Fact Finding Committee and the Legislative Committee. There has been a splendid attendance at all of these meetings, and the legislative program, when completed and presented at the regular session in January, 1949, was the result of the combined thinking of the members of our various groups.

The program for the creation of a four-year school of medicine and dentistry in West Virginia was referred to a legislative interim committee for further study, but two other important bills sponsored by the Association were passed practically without opposition in either branch of the legislature.

One of these bills provides for the entire reorganization of the state health department and the creation of a state board of health. The other creates a new medical licensing board, which, on July 1, 1949, took over all of the medical licensing duties of the public health council.

Both of the new boards are organized, and the work incident to the reorganization of the state department of health is progressing nicely.

A legislative interim committee, with an advisory committee composed of doctors and members of other professional and lay groups, will make a study of the whole field of medical education and will report back to the legislature in 1951 with reference to the advisability of the creation of a four-year school of medicine and dentistry in this state.

With the exception of the legislative program, the new public relations program has accounted for more work on the part of the headquarters staff than any other item of business on the agenda during the past fifteen months.

The whole campaign has been a tremendous undertaking. It has meant the collection of thousands of dollars representing the AMA assessment of $25.00 and the state voluntary contribution of a similar amount. It has also meant hours of work for Dr. Frank J. Holroyd and his public relations office force at Princeton.

A report concerning receipts and expenditures of this committee will be made by Doctor Holroyd, the chairman, and it is therefore not necessary for me to elaborate further upon these activities.

I do compliment Doctor Holroyd for his patience, understanding and hard work in directing a campaign of this magnitude. I think that every member of this Association will agree with me that West Virginia has gone a long way toward convincing our people that it would be a fatal mistake to adopt any form of compulsory health insurance.

Due to an increase of more than thirty per cent in printing costs, effective January 1, 1948, there was a loss of more than a thousand dollars in the Journal account during 1948. This is due to the fact that no increase in advertising rates could be made under our several contracts with advertisers until the end of the year.

New rates approved by the publication committee, effective January 1, 1949, have enabled us to make the Journal a little more than pay for itself since that date.

The increase which we were obliged to make in advertising rates has not materially affected our adver-

tising accounts. The losses in contracts were few, and new accounts which we were able to obtain during the year just about offset the losses. The American Medical Association's Cooperative Medical Advertising Bureau has been the chief factor in helping us to maintain our advertising volume. Unless unlooked for losses occur in present contracts, or further increases are made in printing rates, the Journal should more than carry itself during the remainder of the year.

The quality of the scientific papers published has brought favorable comment from many of our members. Much credit is due Dr. Walter E. Vest, the editor, and the other members of the publication committee for the excellent screening which has been done with a view to affording our readers the highest possible quality of scientific material available.

Membership Statistics

There has been but little change in total membership statistics since the annual meeting in May, 1948. We have sustained a loss of twenty-eight members by death, and sixty-eight by relocation in other states. These losses are offset by the election of ninety-three new members.

As of August 1, 1949, the membership totaled 1399 as against 1402 at the time of our last annual meeting in May, 1948. Of this total number, 109 are honorary lifetime members. So, to date we have on our rolls but 1290 active members.

Membership by Societies

The membership by component societies as of August 1 is as follows:

Barbour-Randolph-Tucker	42
Boone	18
Brooke	6
Cabell	159
Central West Virginia	55
Doddridge	2
Eastern Panhandle	31
Fayette	43
Greenbrier Valley	29
Hancock	19
Harrison	80
Kanawha	245
Logan	39
Marion	57
Marshall	18
Mason	5
Mercer	57
Mingo	29
Monongalia	54
McDowell	65
Ohio	103
Parkersburg Academy	91
Potomac Valley	29
Preston	16
Raleigh	65
Summers	8
Taylor	11
Wetzel	12
Wyoming	11

1949 Honor Roll

Before the deadline for the payment of dues was reached on April 1, sixteen of the 29 component societies had reported a one hundred per cent paid-up membership. The following societies are on the 1949 honor roll:

B-R-T, Boone, Brooke, Doddridge, Eastern Panhandle, Greenbrier, Harrison, Logan, Marshall, McDowell, Mercer, Monongalia, Potomac Valley, Taylor, Wetzel, and Wyoming.

A serious shortage of doctors still exists in West Virginia. This shortage is evident in our mining communities, rural areas, and smaller towns. The need particularly is for general practitioners.

We carry in our files a current list of openings in West Virginia which are passed along immediately to any qualified doctor who indicates a desire to locate in West Virginia. By correspondence and by phone we have succeeded in placing several doctors during the past year, particularly in the coal mining communities. However, it is not often that we can find a doctor who is interested in locating in a strictly rural area.

On behalf of myself and the other members of the headquarters staff, I thank the officers and members of the Council, and the chairmen and members of our active committees for their very fine cooperation during the past year.

These men and women have ungrudgingly given generously of their time in attending meetings. They feel and have felt that it is their duty to give their all in support of organized medicine, especially in view of the effort that is being made to nationalize the profession.

It is my impression that they not alone as physicians, but as citizens of West Virginia, feel that it is their duty to provide for the people of this state the very best public health system in the country, and that it is also their duty to help solve our doctor shortage by providing complete medical education in this state for our students who are completing their pre-medical work.

It will be interesting to watch developments under the new order in the field of public health, and state officials, and our members who hold high office in the two new boards, deserve the continued cooperation of all groups interested in this vital problem.

Sincerely,
CHARLES LIVELY,
Executive Secretary.

COMMITTEE ON SYPHILIS

Inasmuch as there is an increasing trend toward rapid treatment of syphilis by practicing physicians, your committee submits the following recommendations:

1. (a) That an effort be made to disseminate among physicians information regarding the necessity of post-treatment observation and the proper use and interpretation of the quantitative serologic tests;

(b) That funds be made available to the State Hygienic Laboratory for the more liberal performance of quantitative serologic tests; and

(c) That private laboratories be encouraged to perform quantitative serologic tests for syphilis upon re-

A "soft matrix for bulk for the stools"*

Metamucil®

Principles ascribed by this author* to Metamucil—the "smoothage" management of constipation—are:

. . . demulcent action
. . . ability to absorb and hold water
. . . nonirritating to the intestinal mucosa
. . . providing a soft matrix for bulk in the stools

Metamucil promotes smooth, normal evacuation by furnishing a nonirritating, water-retaining colloidal residue in the large bowel.

Metamucil is the highly refined mucilloid of Plantago ovata (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent.

G. D. Searle & Co., Chicago 80, Illinois.

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

Searle

Research in the Service of Medicine

quest by physicians, and that in the laboratories doing quantitative tests, approval for premarital serologic testing by the state department of health be contingent upon satisfactory performance of both the qualitative and quantitative tests.

2. That the component medical societies study a plan for the investigation of positive serologic reports from private laboratories similar to that which has proven successful in Parkersburg and Wood County.

3. That, inasmuch as penicillin is now definitely the drug of choice in the treatment of syphilis, that the distribution of arsenical and heavy metal preparations by the state health department be discontinued after present supplies are exhausted.

4. That, inasmuch as out-patient treatment of medically indigent patients having venereal disease is not yet practical in West Virginia because of the lack of adequate local public health facilities in all except a few localities, every effort be made to continue the operation of the West Virginia Medical Center until such time as all known cases of venereal disease can be treated elsewhere.

5. That the necessity of prenatal serologic testing be brought to the attention of all physicians and that the state department of health take necessary measures to secure the compliance of those physicians who habitually neglect this requirement.

Respectfully submitted,
C. A. Hoffman, M. D.,
Chairman,
Hunter Boggs, M. D.,
N. H. Dyer, M. D.,
John F. McCuskey, M. D.,
Richard Corbitt, M. D.

NECROLOGY COMMITTEE

The following is a list of West Virginia doctors whose deaths during the past year have been reported to the West Virginia State Medical Association:

1948

May 14 ..... John L. Bosworth, Elkins
May 28 ..... Byron W. Eakin, Blacksburg, Va.
May 30 ..... Achilles S. Abshire, Beckley
June 1 ..... William Joseph Leahy, Mannington
June 11 ..... Carl Frost Raver, Charleston
June 20 ..... Aubrey F. Lawson, Weston
June 20 ..... James R. Vermillion, Princeton
July 20 ..... Alvin Thomas Jordan, Hurricane
July 23 ..... James Amyat Moorford, Grantsville
August 30 ..... William E. Whiteside, Parsons
September 12 ..... John S. Shaffer, Cannelton
September 24 ..... Charles Perry Burke, Eastgulf
October 31 ..... Samuel Walter Cottle, Morgantown
November 15 ..... Abner Osburne Albin, Charles Town
November 22 ..... Eustace Thomas Goff, Parkersburg
November 29 ..... Claude N. Rucker, Marytown
December 4 ..... Francis Eugene Martin, New Martinsville
December 15 ..... Luther Enoch Roberts, Rosedale

1949

January 2 ..... Frank L. Matson, Wellsburg
January 29 ..... Harry George Steele, Bluefield
January 31 ..... Hugh Dunn, Richwood
January 31 ..... Horace Singleton Falconer, Fairmont
February 2 ..... John Wallace Compton, Ronceverte
February 2 ..... Clarence E. Peery, Nashville, Tenn.
March 7 ..... Howard T. Phillips, Wheeling
March 15 ..... Charles H. Hall, Shinnston
March 17 ..... Roland Eldridge Stump Taylor, Paw Paw
March 30 ..... Dennis Bliss Jarrell, Beckley
April 10 ..... Perry French Marks, Walton
April 13 ..... William T. Henshaw, Charleston
April 19 ..... Harwood Arthur Taylor, Mullens
April 20 ..... Charles Elihu Copeland, Charleston
April 23 ..... Robert Wert Dunham, Elkins
April 23 ..... Victor L. Wetherby, Welch
May 3 ..... Arnold Jarrett Given, Rensford
May 7 ..... Thomas George Harris, West Milford
May 26 ..... Orra Fernando Covert, Moundsville
June 2 ..... Herbert H. Haynes, Clarksburg
June 21 ..... Todd William Keith, Harrisville
July 6 ..... William Frederick Bruns, Ceredo

Respectfully submitted,
J. C. Peck, M. D.,
Chairman,
W. L. Van Sant, M. D.,
James McClung, M. D.,
A. Poole, M. D.,
E. V. McElfresh, M.. D.

CONTROL OF COMMUNICABBLE DISEASES

For influenza, there is now a quite effective vaccine offering good protection against the more common strains. The duration of this protection is short, probably not exceeding one year. Against the common cold there is no protective vaccine or specific therapy. In the case of poliomyelitis all the vaccines to date have not proven sufficiently innocuous to warrant their use. Convalescent serum, various drugs, and antibiotics have no specific value in the treatment of acute or chronic cases.

The role of flies in the transmission of poliomyelitis is as yet not completely determined, but it is the general belief that they do not represent the principal mechanism of transmission during an epidemic. Encephalitis of the St. Louis type and of the equine types are accidental infections in man frrom natural host reservoirs, birds and animals, and transmitted by arthropod vectors. Mosquitoes, chicken mites, and lice have been shown to be naturally infected vectors for these diseases.—Seward E. Miller, M. D., in The Journal-Lancet.

SOCIALISTIC CRUTCH NOT NEEDED

They (the advocates of socialized medicine) say we cannot afford to pay for our illness today, yet we spend over three billion dollars on luxuries such as tobacco alone every year. Surely we are not as bad off as they would have us believe. I still have confidence in the American way of life and that it will find a way to pay for catastrophic illness without debasing the whole of a vigorous and prosperous nation to the degrading use of an awkward crutch of socialism.—Fred Sternagel, M. D., in Polk County (Iowa) Medical Bulletin.

THE WEST VIRGINIA MEDICAL JOURNAL

302 ATLAS BUILDING. CHARLESTON. W. VA.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Editor
WALTER E. VEST, M. D.
955 Fourth Ave.
Huntington, W. Va.

Managing Editor and
Business Manager
MR. CHARLES LIVELY
Box 1031
Charleston 24, W. Va.

Associate Editors:
EDWARD J. VAN LIERE, M. D.
Morgantown, W. Va.
W. M. SHEPPE, M. D.
Wheeling, W. Va.
G. G. IRWIN, M. D.
Charleston, W. Va.
R. H. EDWARDS, M. D.
Welch, W. Va.

JAMES R. BLOSS, M. D., Editor Emeritus, Huntington

Vol. XLV OCTOBER, 1949 No. 10

THE PHYSIOLOGIC BASIS OF THE ELECTROCARDIOGRAM

By R. J. McNAMARA, M. D., F. A. C. P.*
Charleston, West Virginia

The electrocardiogram is a graphic representation of the changing electrical activity in the myocardium with each heart beat. For many years, interpretation of the electrocardiogram rested to a large extent on an empiric correlation between the form of the curve and the clinical and necropsy findings; but in recent years, progress in electrophysiology has made possible a more rational approach. An attempt will be made to summarize the present status of the physical and physiologic background of the normal electrocardiogram.

The basic principle of electrocardiography lies in the fact that all living tissue can produce an electric current when activated by adequate stimulation. This truth was discovered by Luigi Galvani and reported in 1792. The knowledge was first applied to the heart in 1856 by Kolliker and Muller, who discovered that the exposed contracting frog's heart produced a small electric current with each beat. This current was successfully recorded by Sanderson and Page, of England, in 1878, using a capillary electrometer[1]. The instrument consisted of a vertical column of mercury in contact with sulphuric acid; passage of an electric current through the column disturbed the relation of the two and the small movements of the mercury meniscus were photographed on sensitive paper. In this manner, in 1887, the first electrocardiogram in a human was recorded by Augustus D. Waller, a London physiologist, who also introduced the term "electrocardiogram". The method was cumbersome and required mathematical computation for correction of curves. With the invention of the string galvanometer by Willem Einthoven in 1903, a practical method of electrocardiography was available. In more recent years, the development of electronic phenomena has produced the vacuum tube amplifier type of electrocardiograph.

The bio-electric phenomena concerned in the formation of the normal electrocardiogram have to do with the electrical potential differences arising from stimulation of a cell. The exact physicochemical mechanism of this process is not known. There are three aspects of the problem: (1) the origin of cardiac currents, (2) their nature and propagation through the heart muscle and (3) their distribution throughout the body.

(1) The origin of the tissue electricity may be explained by the membrane theory[2] which postulates that the surface of a resting, living cell behaves like an electrically *polarized* membrane, that is, there is equilibrium between the inner negatively charged and the outer positively charged surfaces. Stimulation of the cell probably causes an increased permeability of the membrane which permits a movement of the positive and negative ions giving rise to a local electric current (the action current) which may be recorded by a galvanometer. The current so developed spreads by contiguity, bringing about

*From Staats Hospital.

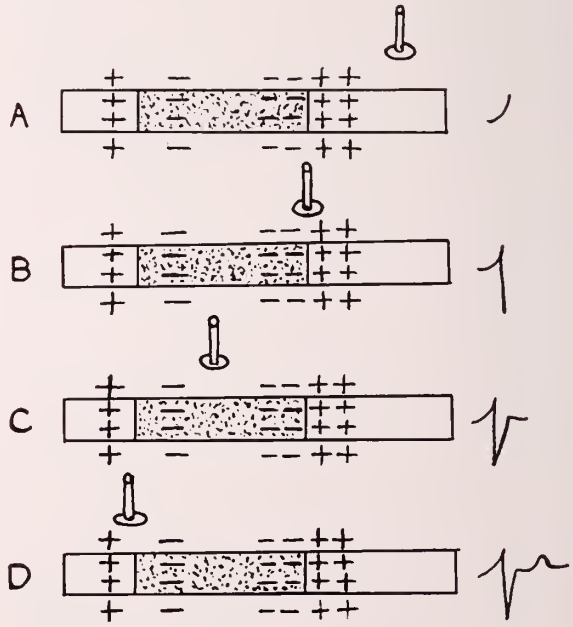
LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

a similar change in the polarized membrane of the adjacent regions until the whole cell becomes *depolarized* This process constitutes the wave of excitation. The process of restitution or *repolarization* begins as soon as depolarization of the cell is complete; depolarization is very rapid, almost explosive. while repolarization in heart muscle is much slower. The restitution process begins at the same point in the cell at which depolarization began if the duration of depolar ization may be considered equal in all parts of a cell of uniform physiologic properties

(2) The nature of the action current and its propagation through the cardiac muscle was originally explained by the "negativity" theory, or theory of distributed potential differences, which supposed that the passage of the impulse in a base-apical direction created two oppositely charged masses of muscle, the activated muscle serving as an extensive negative pole and the unactivated as an extensive positive pole the potential difference between the two producing the flow of current which activates the galvanometric deflections. This explanation was found to be inadequate by Sir Thomas Lewis[3] who advanced the theory of limited potential differences which explained the excitation wave as being localized to the junction of active and inactive muscle, the former being relatively negative and the latter relatively positive. Lewis' theory was the forerunner of the doublet theory proposed by Craib[4] and subsequently further developed as the dipole theory by Wilson, Macleod and Barker[5]. This theory postulates that the excitation wave consists of electrical charges of opposite and equal polarity, closely situated together, the positive charge in advance and pointing toward the inactive muscle, the negative charge in the rear, facing the muscle already activated. The combination of positive and negative charges situated at the tissue surface and arising from a common electromotive source within the tissue constitutes a doublet, the axis of which is that of a line connecting the two charges. When the muscle is stimulated, doublets are formed at the boundary between active and resting muscle. An essential of the theory is that the effective electric forces be localized and limited to the immediate area of fibers passing from the resting to the active state, all other muscular tissue being considered electrically neutral. The doublets during repolarization are considered to have reversed polarity, the negative charges in advance, the positive charges in the rear and with the poles farther apart, thus accounting for the more gradual repolarization process which leaves in its wake resting muscle.

Stimulation, therefore, of a resting cell results in the development at the point of stimulation or a wave of excitation which spreads rapidly throughout the cell, causing the depolarization and being followed by a slower wave of repolarization resulting from tissue activity, which restores the cell to the resting state. These stages in the electrical activity of tissue may be demonstrated by the deflections of a galvanometer, the leads of which are in electrical contact with the tissue or a conducting medium surrounding it. Such records made with muscle tissue are direct leads and are referred to as electromyograms or electrograms.

The electric deflections resultant upon a wave of excitation passing over cardiac muscle are illustrated in figure 1 in which an exploring electrode. so connected that relative positivity causes an upward deflection, is placed on the auricular muscle of a frog and the indifferent electrode placed at a distance from the heart (the hind leg). Stimulation of the muscle produces a curve, modified after Macleod[6], similar to that of D in figure 1 which is seen to consist of two parts: a rapid, deep, initial deflection and a slower, shallower, terminal deflection, separated by a period of neutrality; these deflections are accounted for by the doublet theory as illustrated in the diagram.



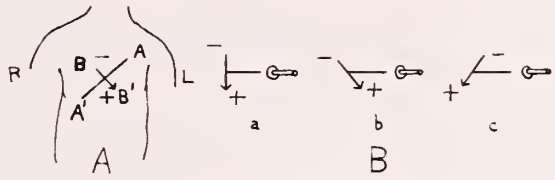
1

The approaching excitation wave (indicated by stippling, and passing from left to right) with its anodal or positive aspect in advance causes a rising potential at electrode A which produces

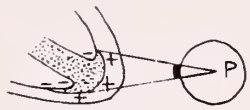
an upward or positive deflection. When the crest of the wave reaches the electrode B there is a sharp fall in potential due to the arrival of the wave under the electrode and a rapid, deep negative deflection is inscribed. As the wave proceeds, its relationship changes as at C which faces muscle in which no potential difference exists and the deflection, therefore, returns to the baseline. At D the final part of the excitation wave with inversely oriented and more widely distributed doublets comes abreast the electrode, causing the slower, less vigorous positive terminal deflection.

The wave consists of three sections: an intense, positively fronted forepart, a middle portion of sustained activity, and an afterpart with more dispersed and reversely oriented charges. Each part of the wave is responsible for a characteristic effect on the electrogram. The rapid initial deflection, the secondary neutral phase and the slower terminal deflection in the electrogram correspond to the QRS complex, the S-T segment and the T wave, respectively, of the electrocardiogram. The corresponding waves of the electrocardiogram are produced by the same phenomena in the heart. The chief difference between the cardiac electrogram (direct leads) and the electrocardiogram (indirect leads) lies in the relation of the electrodes to the source of the heart's current. Direct leads represent largely the potential variations only of the area of the cardiac muscle upon which the electrodes are placed. In the standard electrocardiogram, the contact with the heart is much broader inasmuch as it is by way of the tissues surrounding the heart and represents more the activity of the heart muscle as a whole.

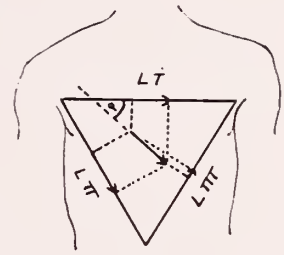
(3) The body constitutes a medium which conducts electricity in three dimensions and therefore the distribution of cardiac action currents throughout the trunk depends on the principles governing the distribution of electric currents in a volume conductor. The heart may be considered, by reason of its generated electricity, as an electric battery surrounded by a mass of conducting medium consisting of tissues of differing resistances (thoracic and abdominal viscera) throughout which an electrical field is established with each heart beat. Lines of current flow throughout the trunk are formed from positive to negative pole. The extremities serve simply as linear conductors and their potential at all points is the same as that of the junction of the extremity to the trunk (shoulder and pubis). The term "potential" describes the intensity of electrical energy which may be positive, negative or zero. In bipolar electrocardiography (standard leads) the difference in electrical potential, or "electromotive force", between two points is measured by the galvanometer.



2



3



4

Assuming that the positive and negative poles of figure 2-A represent the source of electricity in the heart at a given instant, the potential of a point on the surface of the body will depend on:

(1) The location of the point relative to the axis of the dipole or doublet. All points on plane A-A' are at zero potential because they are equidistant from the positive and negative poles. All points on the negative side of the plane will have a negative potential, and all points on the positive side will have a positive potential, the potential increasing as the point approaches the positive pole, and decreasing as it approaches the negative pole. The magnitude of potential will vary according to the angle which a line from the peripheral point to the center of the dipole makes with the axis of the dipole[5]. When this line is perpendicular to the dipole axis the potential of the point is zero (figure 2-B-a); as the angle between the line and the positive half of the dipole becomes smaller, the positive potential at the point increases (b), becoming maximal when the dipole axis and the line coincide. As the angle between the line and the negative half of the dipole becomes smaller, the negative potential of the point increases (c), reaching greatest negativity when the lines coincide. The maximum positive potential is at point B' because it is, at the same time, nearest to the positive pole and farthest from the negative pole; the maximum negative potential

is at point B for similar but opposite reasons. The potential difference (or electromotive force) between a point in the negative field (R) and one in the positive field (L) is the algebraic difference between the two.

(2) The distance of the point from the source of the electricity. The potential varies inversely as the square of the distance.

(3) The strength of the cardiac battery, which is proportional to the product of the area of the partially depolarized muscle fiber and the intensity of its polarization[5].

(4) The conducting quality of the tissues separating the heart from the point. Electromotive forces are better transmitted through muscle, liver or chest wall than through lung tissue[7].

These conditions may be illustrated by connecting the peripheral point P with every point on the circumference of the activated membrane, thereby forming a cone (figure 3). A sphere is now inscribed about the point. The magnitude of potential at the point is proportional to the segment of sphere cut off by the cone[8]. The aspect of the excitation wave viewed from the point of the cone gives the polarity of the potential; if the positive front presents, the sense of the potential will be positive; if the negative side is seen, the potential will be negative.

The direction and size of the cardiac battery change constantly during the cardiac cycle with a consequent continuous variation in the potential distribution over the surface of the trunk[9].

The electromotive force transmitted to the surface is recorded between arbitrarily selected points. In clinical electrocardiography, the points between which potential differences are measured are defined by the standard leads in universal use since their adoption by Einthoven. Lead I records the potential difference between the right arm and left arm, lead II between the right arm and left leg, and lead III between the left arm and left leg. By general agreement the poles of the electrocardiograph are so attached to the surface points of the body that relative positivity at the left arm as compared to the right arm (I), the left leg as compared to the right arm (II) and the left leg as compared to the left arm (III) will give an upward deflection on the completed record. Conversely, relative negativity at the left arm to the right arm, at the left leg to the right arm and at the left leg to the left arm will result in a downward movement on the record. Each of the two points will have differing potentials at the same time by reason of their different orientation to the source of the electric current. Each lead gives a different view of the pathway of the excitation wave which has been compared to observing a long ship moving within a triangular enclosure and viewed from the top (lead I), the right side (lead II), and the left side (lead III)[9].

Two types of electrocardiograph are in present use: the string galvanometer and the vacuum tube amplifier type. The string galvanometer consists of a permanent magnet between the poles of which is placed a string or conductor of current from the body areas selected as lead sites. Passage of a current through the string creates an electromagnetic field surrounding it which interacts with the permanent electromagnetic field of the magnet causing a side thrust, the direction of which is determined by the direction of current flow through the string. The amplitude of deflection is proportional to the current flow. Proportionality between string current and the voltage originally present at the patient electrodes is dependent on conditions at the skin-electrode junction. If this current is proportional to the original electrode voltage, then, by the use of a standardization technic, the deflections can be read in terms of the original voltage. The amplifier electrocardiograph differs from the string type in that the galvanometer or recording device is separated from the patient by an amplifying system. The amplifier responds directly to the cardiac voltages without drawing any appreciable current from the patient circuit. The output of the amplifier, which is a high energy copy of the input voltage, actuates the recording device. In many photographic instruments a small mirror is attached to a coil of fine wire suspended in the field of a permanent magnet. Current passage through the coil is proportional to the voltage applied to the input terminals of the amplifier. Changes in the relative intensity of the electrical fields of the magnet and the current-carrying coil cause a change in the position of the mirror, a beam of light from which is recorded on photosensitive paper. In direct writing instruments, a stylus propelled by a moving coil galvanometer records the voltage fluctuations directly on paper.

The excitation wave in the mammalian heart arises from stimulation of the auricular muscle by the sino-auricular node, the head of which lies at the angle between the superior vena cava and the body of the right auricle. The impulse spreads radially over the auricular muscle at the rate of approximately 1. meter per second and reaches the ventricular muscle by way of the

auriculoventricular node situated in both the interauricular and interventricular septa and in the connective tissue of the auriculoventricular junction. The conduction is slowed in the auriculoventricular node to about 0.2 meters per second. The lower end of the node joins directly with the common auriculoventricular bundle which lies behind the membranous portion of the interventricular septum and runs toward the apex of the heart, dividing into a right and left bundle branch. The right branch, a direct continuation of the bundle, continues as such to the anterior papillary muscle without early branching; the left crosses over to the left side of the septum and promptly subdivides as soon as it reaches the subendocardium. A complex terminal network (Purkinje's fibers) is formed as a result of the extensive branching of the right and left bundle branches. The terminal network is believed to be confined to the subendocardial layers of the ventricles, but the work of Abramson and Margolin[10] has indicated that the Purkinje fibers may extend into the myocardium and reach even to the epicardial surface. The rate of spread of the impulse increases in the auriculoventricular bundle, and in the bundle branches and Purkinje's fibers is approximately 4. meters per second.

The major deflections of the electrocardiogram were designated P, QRS and T by Einthoven. P, R and T are upward in direction, and Q and S downward; the latter two may be absent. The first of the major deflections, the P wave, represents depolarization of the auricles. Its beginning marks the time of auricular stimulation by the sino-auricular node and its end marks the completion of auricular excitation. The QRS wave represents depolarization of the ventricles and measures the time required for the excitation wave to traverse the ventricular muscle. The ventricles, unlike the auricles, are excited from within outward. The T wave represents the repolarization or process of restitution in the ventricles. The repolarization wave of the auricles, the auricular T Wave or T^a, is in opposite direction to the P wave, but is usually negligible on the completed record, being obscured by the ventricular deflection. Between the QRS and T waves is the S-T segment, representing the period during which all parts of the ventricles are activated. Between the T and the P wave is the period during which the entire heart is in the resting, polarized state. A "U" wave sometimes occurs following the T wave. Its significance is not definitely known, but the wave is thought probably to result from position changes of the heart during ventricular relaxation[11]. No electrocardiographic record is produced by passage of the stimulus through the specialized conduction tissues (nodes, bundle, branches and fibers); muscle tissue must be stimulated for registration of the impulse.

The electrocardiogram may be divided into two parts, the auricular portion (P and T^a) and the ventricular component, consisting of waves QRS and T. The ventricular portion is of greater clinical importance and is the subject of present inquiry.

Directly acquired evidence of the sequence of ventricular activation in man is not available. From a study of the sequence of activation of the ventricles of the dog and the analysis of electrocardiograms in humans, Lewis[12] concluded that the excitation wave in man spread downward from the upper part of the septum to the endocardial surfaces of the right and left ventricular apices and thence passed horizontally outwards on both sides through the lateral walls of the heart, finally moving upward and outward to reach the base of the heart. This description coincides with the current view which is that the first part of the ventricle activated is the upper part of the interventricular septum[13-14-15], the impulse passing from the left to the right side and then downward through the septum to the apex where early activation of the right ventricular apex and right ventricular wall occurs, followed by activation of the left ventricular apex, the impulse then passing counterclockwise through the left ventricle to reach the base of the heart, the pulmonary conus and basal left ventricle being activated last[16].

Each doublet accompanying the excitation wave may be considered a small vector force since it possesses magnitude and direction. The innumerable doublets associated with the excitation process passing through the ventricular muscle in approximately the above manner, may be theoretically summated into a single vector or dipole representing the average direction and magnitude of all doublets active at a given instant. This vector forms the instantaneous electrical axis of the heart and determines the direction and amplitude of the deflections of the electrocardiogram during ventricular depolarization or inscription of the QRS complex. The relationship of the electrical axis to the recording electrodes depends on the position of the heart in the trunk and this factor, in addition to those affecting transmission of the electrical energy through the body, ultimately governs the contour of the normal electrocardiogram. In any lead, flow of current toward the electrode attached to

the positive pole of the galvanometer causes an upright deflection in the record, and current flow in the opposite direction causes a downward deflection. Q waves in the normal electrocardiogram signify *beginning* ventricular excitation in a direction from positive to negative electrode in a standard lead, while S waves signify *final* ventricular excitation in the same direction.

Less is known regarding the mechanism of the terminal deflection, the T wave of the electrocardiogram, which represents the repolarization or recovery period of the ventricular muscle. This process is slower and less intense than that of excitation as evideneed by a lower gradually ascending curve occupying a longer time interval.

The waves of depolarization and repolarization in a simple muscle strip proceed in the same direction, i. e., the repolarization process begins at the same point in the muscle at which depolarization began, indicating that the duration of activation is the same in all parts of the muscle. This circumstance results in a terminal or T deflection in opposite direction to the initial or QRS deflection. That this does not occur in the normal electrocardiogram of humans is evidenced by a T wave in the same direction as the QRS complex in the standard leads, indicating that depolarization and repolarization do not follow the same course and that the duration of depolarization is not uniform throughout the ventricle. This variation in the excitatory process is represented by the ventricular gradient which is responsible for the T waves normally observed. If systole were everywhere uniform and the order of recovery identical with that of excitation, no gradient would exist since equal electrical forces would traverse the same pathway during each phase. Because of local differences in blood supply, nervous control or metabolism, the duration of depolarization is not the same in all parts of the ventricle, the order of repolarization is reversed and the T wave is written in the same direction as the QRS complex[17]. A theory as to the immediate cause of this unbalancing of electrical forces during repolarization is the factor of intraventricular pressure[18-19]. The highest blood pressure in the body is found in the left ventricle during systole. At this time the endocardial surface of the ventricle is subject to a pressure ischemia which delays recovery in the area so that repolarization begins in the epicardial region and moves toward the endocardium with a resultant T wave in the same direction as the QRS complex.

The direction of the T wave is dependent on the order of depolarization (indicated by changes in the form of QRS) and upon alteration of the excited state locally (the ventricular gradient). The concept of the ventricular gradient is useful clinically in determining T wave changes due to local interference with repolarization (primary) and those due to a changed order of depolarization (secondary)[20]. The T wave and the forces of regression are the most sensitive part of the electrocardiogram. The QRS complex is relatively stable and is influenced but little by many factors which modify the T wave.

A method of geometric analysis of the electrocardiogram was developed by Einthoven[21] during investigations of the influence of the position of the heart on the form of the electrocardiogram. This concept is the Einthoven equilateral triangle theory in which the human body is represented as a plane of infinite radius in the form of an equilateral triangle, the apices of whieh correspond to the right shoulder, left shoulder and pubis. The heart is considered as a dipole or single battery lying in the same plane and in the center of the triangle, surrounded by tissues forming a homogeneous conducting medium. On the basis of these assumptions a centrally placed arrow in figure 4 may represent the average direction and magnitude of all doublets active in the heart at a given moment. The angle which this vector forms with the horizontal side of the triangle or lead I, is known as the angle alpha which is positive if rotated clockwise and negative if rotated counterclockwise from the horizontal when facing the anterior aspect of the thorax. If perpendiculars are dropped from the ends of this vector to each of the sides of the triangle, the direction and lengths of each projection represent the polarity and magnitude of potential in the corresponding lead. The process may be reversed by laying off the amplitude of the simultaneously determined ventricular deflections on the side of the triangle corresponding to the lead and projecting any two of these to the center to determine the length and direction of the electrical axis. This value represents the "manifest potential difference" or projection of the actual potential difference on the frontal plane. The heart is a tridimensional organ and the vector of the action current likewise is tridimensional. The standard electrocardiographic leads, however, lying in the frontal plane of the body, record only potential differences in this plane or the projection on this plane of potential differences arising in other planes of the heart. Those potential differences developing perpendicular to the frontal plane are not recorded. The frontal plane projection of the electrical activity in the heart has been com-

pared by Fahr[22] to a cardiac roentgenogram which is a frontal projection of the mass distribution of the heart.

The determination of the direction of the instantaneous electrical axis of the heart is essentially the calculation of the angle alpha, the normal range of which is between 0° and plus 90°. Angles less than zero degrees and over plus 90° indicate abnormal left and right axis deviation respectively. The electrical axis is determined to a large extent by the position of the heart, which fact impairs the clinical value of the electrical axis as an important sign of cardiac abnormality.

If the electrical axis is determined at successive periods during the depolarization of the ventricles and the terminus of each vector joined by a line, the resulting "loop" is called a vectorcardiogram and demonstrates the varying position of the electrical axis during the QRS interval[23]. Such loops have been directly recorded by use of a cathode ray oscillograph. While interesting and instructive, the records have been difficult to classify and their usefulness, for the most part, is confined to research laboratories.

The Einthoven equation (lead II = lead I plus lead III) expresses the relationship existing between the standard leads by reason of their polarity to each other and bears no relationship to the Einthoven equilateral triangle theory[24]. At any given instant the voltage in lead II equals that in lead I plus lead III because the addition of these leads cancels out the left arm leaving left leg minus right arm, which equals lead II: L. L. − R. A. = (L. A. − R. A.) + (L. L. − L. A.).

Difference of opinion exists as to the validity of the Einthoven triangle hypothesis which is not universally accepted by cardiologists[11-25]. The chief objections to it are stated to be that the body tissues are not homogeneous electrical conductors, that the electrical field of the body is not spherical but ovoid, and that the heart is not centrally but eccentrically placed in the body. Proponents[15-26] of the theory, however, state that for practical purposes the foregoing objections do not invalidate the method.

UNIPOLAR LEADS

The standard leads of the electrocardiogram represent the difference in potential between two points approximately equidistant from the heart and give no direct information as to the potential of a single area. This has been compared by Goldberger[27] to a sphygmomanometer which, instead of giving the systolic and diastolic pressures, gives only the difference between the two, or the pulse pressure.

To determine the potential variation of one area, it is necessary to reduce as far as possible the influence of the negative or remote electrode on the curve contour. Leads made in this way are called unipolar because the potential variations recorded are chiefly those occurring at the positive or proximal electrode. This condition has been approached by the use of an "indifferent" electrode placed at a distance from the heart where its potential variation usually will be but slightly influenced by the heart's electrical field. Such leads are designated CF, CL, CR and CB in which the prefix "C" signifies the exploring electrode as placed on the chest and the letters F, L, R and B indicate the left leg, left arm, right arm or back respectively as the location of the indifferent electrode. It is stated, however, that no area on the body has a zero potential at all times throughout the cardiac cycle. To obviate this difficulty, Wilson, Macleod and Barker[28] devised connections from the right arm, left arm and left leg through equal resistances to a central terminal which was used as the indifferent electrode. It was shown that the sum of the differences in potential between any number of electrodes in a closed circuit must be zero by Kirchoff's law which states that at any branch point the sum of all currents entering a point must equal the sum of all currents leaving the point, or that the sum of electrical currents in a closed circuit is zero. Such a central terminal, while not consistently at zero potential, is said to have a smaller potential variation than a single lead at any point on the body. Leads using the central terminal as the indifferent electrode are known as V (voltage) leads. Unipolar leads are commonly made from the precordial region, the extremities and from the esophagus.

There is at present no general agreement as to the most satisfactory location of the indifferent electrode in making precordial leads; probably the most commonly used are the left leg (CF leads) and the central terminal or V leads. For the precordial exploring electrode, the Committee of the A. H. A. for the Standardization of Precordial Leads[29] has recommended six points and designated these as C_1 to C_6. C_1 is in the right fourth interspace at the sternal margin; C_2 is at the same level to the left of the sternum; C_4 is at the left midclavicular line in the fifth intercostal space; C_3 is midway between C_2 and C_4; C_5 and C_6 are in the anteroaxillary and midaxillary lines respectively at the same level as C_4. The fact that a single lead reflects chiefly the

electrical activity of that part of the heart underlying the electrode is the main reason for making more than one precordial lead. Unipolar leads made from the precordial area are especially valuable in that they include a record of potential differences in the sagittal (anteroposterior) plane of the body which are not recorded in the standard leads. The general outline of the ventricular complexes of precordial leads in dogs closely resembles those obtained when the exploring electrode is placed directly in contact with the ventricular surface. They therefore correlate the information obtained from direct leads in animal experiments with the electrocardiograms in humans, and in this regard may be considered as semidirect electrograms rather than electrocardiograms[26]. Precordial leads are particularly helpful in anterior myocardial infarction, bundle branch block and ventricular hypertrophy.

Unipolar extremity leads are made by placing an electrode from the positive pole of the galvanometer on the right arm, the left arm or the left leg successively and attaching the connection from the negative pole of the galvanometer to a central terminal of which there are two types, the Wilson and the Goldberger. In the former, the central terminal just described is used and connections from all three extremities attach through 5000 ohm resistances to the central terminal. In the Goldberger type no resistances are used between the extremities and the central terminal. Also, the deflections are 50 per cent larger because the connection is removed from the extremity on which the exploring electrode is placed, thereby measuring the potential difference between one extremity and the mean potential of the other two, instead of between one and the three extremities as with the Wilson technic. For this reason, tracings made by the Goldberger method are called "augmented" unipolar extremity leads (aV_R, aV_L, aV_F). Except for size records made by either method are similar.

Unipolar leads made from each arm or the left leg theoretically represent the effect of the electrical axis of the heart on one extremity only. They are therefore comparable to the direct muscle lead of figure 1 and the same principles apply in the interpretation of the deflections. A unipolar extremity lead reflects the electrical activity of whatever portion of the heart it faces; downward deflections represent the negativity of the endocardial surface of the ventricular cavities and upward deflections reflect the positivity of the epicardial ventricular surface[30]. Because the base of the heart is more fixed in position, the right shoulder or right arm potential is the most constant of the unipolar extremity leads. The apex varies considerably in relation to the left arm and left leg by reason of rotation of the heart about its anteroposterior, longitudinal and transverse axes, thereby presenting to the left arm and left leg electrodes a varying aspect of the excitation wave and consequent difference in contour of the curve.

Unipolar extremity leads are the parts from which the standard lead electrocardiogram is made. Each of the two extremity leads contributes equally but in opposite directions to the deflections in the standard lead. The potentials of the right arm enter the galvanometer by the negative pole and the potentials of the left arm by the positive pole; they are simultaneously summed and form lead I. Leads II and III are similarly formed by the confluence of the potentials of the left leg with those of the right arm and with those of the left arm respectively. These relationships are expressed in the following equations[31]:

Lead I = left arm − right arm
Lead II = left leg − right arm
Lead III = left leg − left arm

Under the circumstance of technical increase in voltage of 50 per cent in the augmented unipolar extremity leads as compared to the standard limb leads, the derivation of the latter from the former may be calculated according to the foregoing equations if the results are multiplied by two-thirds[27-32].

The general form of the standard leads may be determined by inspection of the augmented unipolar extremity leads. The deflections of lead I resemble those of the left arm lead minus those of the right arm lead (or plus the mirror image of the right arm lead) multiplied by two-thirds. A large R wave in the left arm lead or a deep S wave in the right arm lead add to the ascending limb of R in lead I, while contrary findings subtract from the amplitude of R_1. Similarly, all negative deflections of the right arm lead or positive deflections of the left leg lead cause upright deflections in lead II. In lead III, a Q wave may be produced by an initial negative deflection of the ventricular depolarization complex in the left leg lead or by an initial positive deflection in the left arm lead. These relations apply in the same manner for the P and T waves as well as for the QRS complex. Not infrequently the algebraic balance of the extremity leads in calculating the standard leads is not perfect. This probably represents the degree to which the conditions of the Einthoven theory are not applicable to the subject in question as

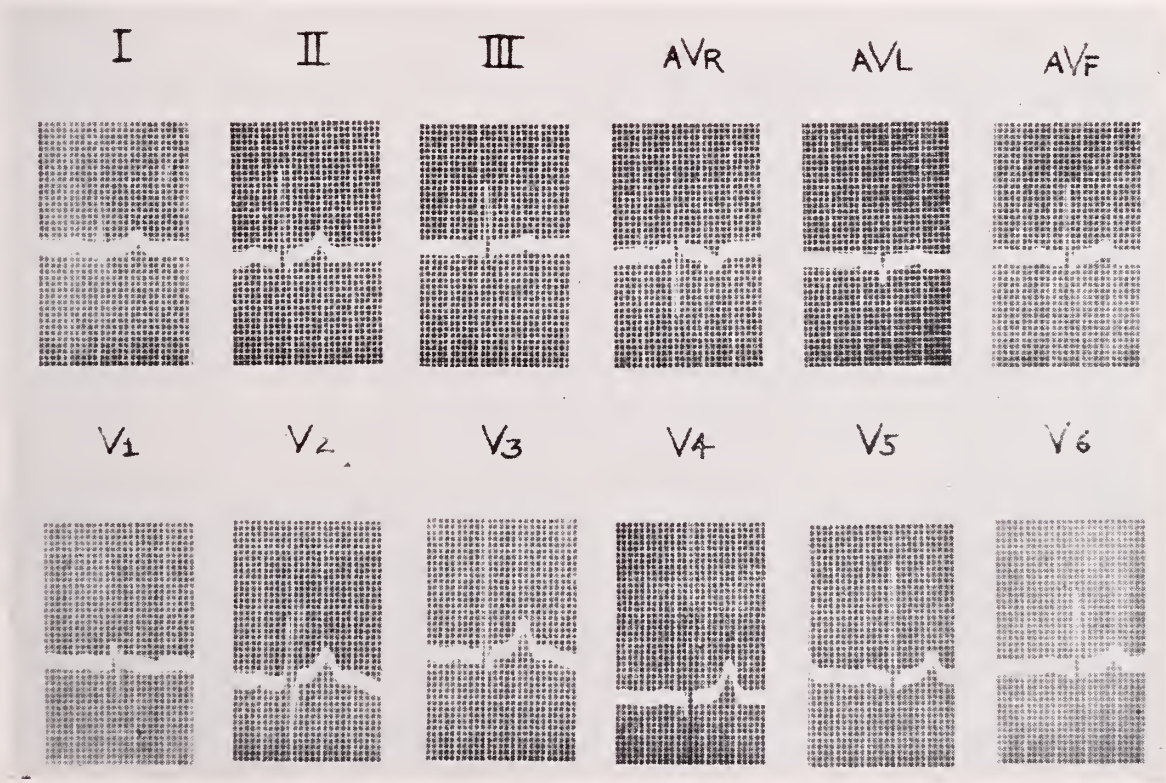
regards equidistance of the electrodes from the heart and variations of the electrical forces out of the frontal plane.

The unipolar extremity leads are of value in correlating the standard leads, which they form, with the precordial leads, which they resemble, depending on the heart position in the chest. They also provide information as to the origin of a particular deflection in the standard leads. The relation between the precordial and unipolar extremity leads was utilized by Wilson and associates[33] to introduce a method of defining five positions of the heart from a purely electrocardiographic standpoint (horizontal, semihorizontal, intermediate, semivertical, vertical). In the horizontal position the ventricular complexes of the left arm lead resemble those of the left precordial area (C_5-C_6) because the potential variations of the left ventricle are transmitted to the left arm; the left leg complexes resemble those usually obtained over the right side of the precordium (C_1-C_2) and reflect the potential variations of the right ventricle. In the vertical position these relations are reversed and in the intermediate position the complexes of the left arm and left leg are similar, the potential variations of both ventricles being equally distributed to each.

Unipolar leads are made from the esophagus by passing the exploring electrode by means of a stomach tube to the lower end of the esophagus where records are taken at intervals from this point upward to the level of the auricles. This route offers the opportunity of placing the exploring electrode in close proximity to the posterior surface of the heart in a manner somewhat analagous to the relation of the precordial leads to the anterior surface of the heart. Below the bifurcation of the trachea the esophagus lies posterior to the left auricle, and near the esophageal hiatus it traverses the posterior basal portion of the left ventricle. By reason of this anatomic relationship an esophageal lead may be helpful in the detection and clarification of auricular arrhythmias and in posterior myocardial infarction.

Inspection of the standard leads of the accompanying electrocardiogram of a 25 year old normal male shows a P_1 and P_2 of equal amplitude and a small diphasic P_3, a very small Q in each lead, a high R_2, moderately high R_3 and smaller R_1, a small S_1 and S_2 and a smaller S_3.

The manner of production of the contour of this electrocardiogram may be accounted for according to the foregoing principles by assuming that the impulse from the sino-auricular node spreads over the auricular muscle in a general direction from the right and above to the left and downward, causing upright P waves in leads I and II and a low, diphasic P_3, since the impulse



is perpendicularly directed toward the line joining the electrodes of lead III. No potential difference is registered by the impulse in its passage through the auriculoventricular node and bundles, and it begins to be recorded again as the beginning of the QRS complex upon stimulation of the upper interventricular septum.

Very small Q waves are present indicating that beginning ventricular excitation did not proceed directly at right angles to the frontal plane. Such Q waves may be accounted for by the impulse pointing upward and slightly to the right for an extremely brief interval at the onset of septal activation. An upward direction would cause a Q in leads II and III, while if slightly to the right, a tiny Q_1 would be formed.

With the spread of the impulse to the subendocardial muscle of the ventricular apices, the inscription of the R wave begins with excitation predominantly to the left and downward indicated by an R largest in lead II. The electrical axis of R is approximately 60 degrees from the horizontal and parallels the line of lead II.

With further passage of the impulse through the lateral wall of the left ventricle, a direction upward and to the left decreases the amplitude of R in leads II and III. Final ventricular activation producing the S_1 and S_2 and small S_3 was evidently directed to the right (S_{1-2}) and slightly upward (smaller S_3).

While the ventricles are in the depolarized state no potential difference exists and the trace returns to the baseline. With the onset of repolarization the T wave is written, the electrical axis of which is directed at an angle of approximately 50 degrees. This accounts for a positive T in all leads, maximal in lead II and smallest in lead III. An important difference between the QRS and T vectors is the fact that the latter points in an inverse direction to the direction of travel of the repolarization wave, i. e., the direction of the migrating impulse and the resultant electrical forces are in opposite directions. This occurs because of the reversed polarity of the doublets in the final part of the repolarization wave[15-34].

The precordial leads reveal P waves upright in all leads except V_1 where P is slightly diphasic.

The potential changes of the ventricular complex in V_1 are similar to those of the right shoulder and demonstrate inversion of QRS and of the T wave. This is a normal variation in V_1, the T waves of all other precordial leads being normally upright due to the reflection of the positive retreating aspect of the ventricular repolarization wave.

V_2 reveals an RS complex, characteristically found over the epicardial surface of the right ventricle. The initial positive deflection results from the approaching interventricular septal and right ventricular excitation waves and is terminated by the oppositely directed left ventricular vector producing the terminal negative deflection. The continued downstroke of S below the baseline (V_2) represents the further spread of the excitation process to tissue activated later than that underlying the electrode. When the electrode overlies that portion of the ventricular muscle last activated, no appreciable S wave occurs (V_5-V_6).

Lead V_3 shows an upright QRS complex, commonly occurring over the epicardial surface of the left ventricle and indicating that the transition zone between the right and left ventricles is between V_2 and V_3.

As the electrode is moved from right to left through the successive precordial positions, the left ventricular influence, which normally dominates the precordial pattern, changes from a negative effect over the right to a positive effect over the left precordium. This causes an increasing R and a decreasing S wave from right to left. The maximum R occurs when the electrode faces the center of the left ventricle (V_4) and as the distance from this point is widened by further shift of the electrode to the left, the amplitude of R decreases (V_5-V_6). The low R from the right side of the precordium indicates the earlier activation of the ventricular muscle on this side, since the peak of R represents the arrival of the excitation wave beneath the electrode and the sharp downstroke or "intrinsic deflection" represents the disappearance of electrical forces of the underlying muscle[12].

When the electrode is moved to the left of the transition zone, it is to the left of the septum and a small Q wave commonly occurs (V_{4-5-6}) due to the transmission of the negativity of the left ventricular cavity at the onset of septal activation.

The right arm lead (aV_R) reflects the potential changes occurring about the right shoulder facing the rear of the auricular excitation wave and producing an inverted P wave. Since excitation of the ventricles proceeds from within outwards, the right shoulder also faces, through the valvular orifices at the base of the heart, the negative aspect of this wave and an inverted QRS complex consisting of a tiny positive initial r, a deep negative S and a small terminal positive

r' is formed. The initial positive deflection results from septal activation, the deep S is a reflection of the negativity of the depolarizing ventricular cavities and the terminal positive r' represents the outward spread of the excitation wave to the base of the heart, the last region to be stimulated. The T wave is downward because the right shoulder faces the negative aspect of the returning repolarization wave from epicardial to endocardial surface.

In the left arm lead (aVL) the potential variations of all complexes are small, probably because the left shoulder faces neither ventricle directly; the RS contour of the ventricular complex resembles that commonly found over the right side of the precordium and the right ventricle.

In the left leg lead (aVF) the left leg faces the head of the auricular excitation wave and the epicardial surface of the left ventricle with a resulting small, upright P wave and a high, upright R and T wave.

The electrical axis is in the semivertical position because the ventricular complexes of the left leg resemble those of the left side of the precordium (V_{5-6}), while the left arm lead faces an area in which the potential variations are small[33]. The contour of the left arm and left leg leads, when the electrical axis of the heart is between the vertical and horizontal, will vary according to the predominating cardiac surface facing the electrodes. Any unipolar extremity lead may be in a transitional zone and not be influenced by either ventricle predominantly, but by a mixture of each.

SUMMARY

A review of the physiologic background of the normal electrocardiogram is presented, particularly in regard to the origin, spread and distribution of cardiac action currents, the Einthoven equilateral triangle theory and the relationships of the precordial, unipolar extremity and standard leads.

REFERENCES

1. Leaman, Wm. G., Jr.: The History of Electrocardiography, Ann. Med. History 8:113, 1936.
2. Wiggers, C. J.: Physiology in Health and Disease, Philadelphia, Lea & Febiger, 1934.
3. Lewis, Thomas: Interpretation of the Initial Phases of the Electrocardiogram with Special Reference to the Theory of "Limited Potential Differences," Arch. Int. Med. 30:269, 1922.
4. Craib, W. H.: The Electrocardiogram, London, His Majesty's Stationery Office, 1930.
5. Wilson, F. N., Macleod, A. G., & Barker, P. S.: The Distribution of the Action Currents Produced by Heart Muscle and Other Excitable Tissues Immersed in Extensive Conducting Media, J. Gen. Physiol. 16:423, 1933.
6. Macleod, A. G.: The Electrogram of Cardiac Muscle: An Analysis which Explains the Regression or T Deflection, Am. Heart J. 15:165, 1938.
7. Katz, L. N.: Concerning a New Concept of the Genesis of the Electrocardiogram, Am. Heart J. 13:17, 1937.
8. Wilson, F. N., Macleod, A. G., & Barker, P. S.: The Interpretation of the Initial Deflections of the Ventricular Complex of the Electrocardiogram, Am. Heart J. 6:637, 1931.
9. Johnston, F. D.: Medical Physics, (Glasser) Chicago, Year Book Publishers, 1944.
10. Abramson, D. I., & Margolin, S.: Purkinje Conduction Network in Myocardium of Mammalian Ventricles, J. Anat. 70:250, 1936.
11. Katz, L. N.: Electrocardiography, Philadelphia, Lea & Febiger, 1946.
12. Lewis, Thomas: The Mechanism and Graphic Registration of the Heart Beat, ed. 3, London, Shaw & Sons, 1925.
13. Ashman, R., & Hull, E.: Essentials of Electrocardiography, New York, Macmillan Company, 1941.
14. Goldberger, E.: The Differentiation of Normal from Abnormal Q Waves, Am. Heart J. 30:341, 1945.
15. Bayley, R. H.: On Certain Applications of Modern Electrocardiographic Theory to the Interpretation of Electrocardiograms which Indicate Myocardial Disease, Am. Heart J. 26:769, 1943.
16. Ashman, R.: The Genesis of the Electrocardiogram, Modern Concepts of Cardiovascular Disease, Vol. 13, No. 5, American Heart Association (May) 1944.
17. Wilson, F. N., Rosenbaum, F. F., & Johnston, F. D.: Interpretation of the Ventricular Complex of the Electrocardiogram, Advances in Internal Medicine, Vol. 2, New York, Interscience Publishers, 1947.
18. Hill, Athelstane: The Genesis of the Normal Electrocardiogram, Brit. Heart J. 8:147, 1946.
19. Burch, G., & Winsor, T.: A Primer of Electrocardiography, Philadelphia, Lea & Febiger, 1945.
20. Wilson, F. N., Macleod, A. G., & Barker, P. S.: The T Deflection of the Electrocardiogram, Tr. Assoc. Am. Phys. 46:29, 1931.
21. Einthoven, W.: Different Forms of the Human Electrocardiogram and Their Signification, Lancet, p. 853, (March 30) 1912.
22. Fahr, G.: An Analysis of the Spread of the Excitation Wave in the Human Ventricle, Arch. Int. Med. 25:146, 1920.
23. Wilson, F. N., & Johnston, F. D.: The Vectorcardiogram, Am. Heart J. 16:14, 1938.
24. Hill, R. F.: The Construction of the Cardiac Vector, Am. Heart J. 32:72, 1946.
25. Wolferth, C. C.: Some Limitations of Clinical Electrocardiography, Tr. Am. Clin. & Climat. Ass'n., 1941.
26. Wilson, F. N.: The Distribution of the Potential Differences Produced by the Heart Beat Within the Body and at Its Surface, Am. Heart J. 5:599, 1930.
27. Goldberger, E.: The aVL, aVR and aVF Leads, Am. Heart J. 24:378, 1942.
28. Wilson, F. N., Macleod, A. G., & Barker, P. S.: Electrocardiographic Leads which Record Potential Variations Produced by the Heart Beat at a Single Point, Proc. Soc. Exper. Biol. & Med. 29:1006, 1932.
29. Supplementary Report by the Committee of the American Heart Association for the Standardization of Precordial Leads, Am. Heart J. 15:235, 1938.
30. Hecht, H. H.: The Influence of the Indifferent Electrode upon the Precordial Electrocardiogram, Am. Heart J. 24:529, 1942.

31. Wilson, F. N., Macleod, A. G., & Barker, P. S.: The Accuracy of Einthoven's Equation, Am. Heart J. 7:203, 1931.
32. Goldberger, E.: A Simple, Indifferent Electrocardiographic Electrode of Zero Potential and a Technique of Obtaining Augmented Unipolar Extremity Leads, Am. Heart J. 23:483, 1942.
33. Wilson, F. N., et al: The Precordial Electrocardiogram, Am. Heart J. 27:19, 1944.
34. Bayley, R. H.: Electrocardiographic Diagnosis, Medical Diagnosis (Pullen), Philadelphia, W. B. Saunders Company, 1944.

MOLD ALLERGY

The air-borne spores of common fungi constitute one of the causes of allergic disease. The most frequent manifestations are rhinitis and asthma, but other allergic effects such as dermatitis, migraine, conjunctivitis and gastro-intestinal reactions are known to occur. The molds of prime importance are *Alternaria* and *Hormodendium*, although some of the less common offenders must be regarded with suspicion. Mold allergy is recognized clinically by the history of summer occurrence not coinciding with the pollen season and by frequent exacerbation when the patient is near hay or straw. Nonseasonal mold allergy may occur.

Treatment can be expected to yield a high degree of satisfactory results, especially if the entire allergic study is carefully correlated. Mold and house dust hyposensitization should be utilized where indicated, together with proper management of pollen sensitivity, food sensitivity and miscellaneous inhalent sensitivities. Experience indicates that the best results are obtained with the perennial method of treatment.—Ernest Grinnell, M. D., in The Journal-Lancet.

ADDING LIFE TO YEARS

The medical and health crisis which we face in this country today is not one of sanitation, vaccination or water purification; it does not involve typhus, malaria, venereal disease and the other problems which can be brought under the focus of the microscope and within the orbit of our modern therapeutic knowledge. The patterns are established and the tools are available to meet these problems.

Our present-day crisis is a slowly advancing, insidous, chronic epidemic, progressing just as slowly and surely as a serpigenous ulcer. As the years progress, it will cease to be epidemic and will become endemic, our self-created endemic of chronic disease and an aging population. Just as public health solved the epidemics created by bacteria, we can meet this epidemic of chronic disability only by creating new weapons and new understanding, taking both the medical and social responsibility for this Frankenstinean phenomena we have created.

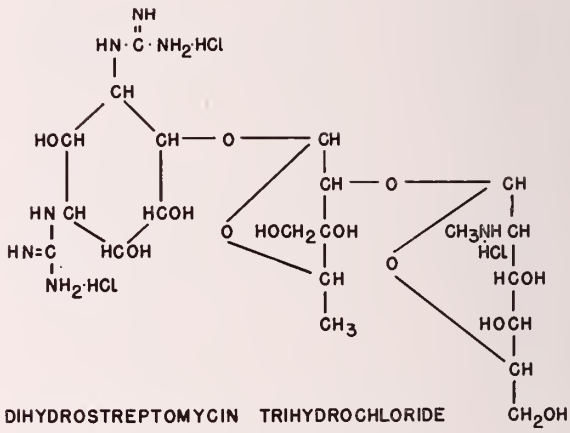
As Bortz so aptly summarized, "The society which fosters research to save human life cannot escape the responsibility for the life thus extended. It is for science not only to add years to life, but, more important, to add life to the years." This is our responsibility.—Howard A. Rusk, M. D., in Buletin N. Y. Acad. Med.

A CONCISE PHARMACOLOGY OF THE NEW ANTIBIOTIC AGENTS

By DAVID FIELDING MARSH,
Department of Pharmacology, School of Medicine,
West Virginia University, Morgantown, W. Va.

INTRODUCTION

Three years ago an article was published in this journal* on the general pharmacology of the then known antibiotics with particular emphasis on penicillin and streptomycin. Fabulous progress has been made since then in the discovery and introduction of new agents. Penicillin is so commonly used that it is no longer considered a new drug. The greatest progress in the penicillin field has been the rational clinical application of the theoretic pharmacologic concepts concerning the prolongation of duration of action of the agent. Dosage forms are available that allow one single administration of the drug for the treatment of conditions that previously required administration every three hours for two



DIHYDROSTREPTOMYCIN TRIHYDROCHLORIDE

or three days—preparations that not only produce very prolonged therapeutic effects but also produce these effects very promptly.

Although complete information is lacking concerning some of the new agents, the intensive efforts of many research teams have provided sufficient data to make possible their rational clinical use.

DIHYDROSTREPTOMYCIN

History, 1946.—Peck, Hoffhine and Folkers prepared dihydrostreptomycin by the catalytic hydrogenation of streptomycin, an antibiotic commercially prepared by the culture of *Streptomyces griseus*. 1947. Donovick and Rake demonstrated that dihydrostreptomycin had very similar antibacterial activity in vitro but considerably less toxicity in vivo.

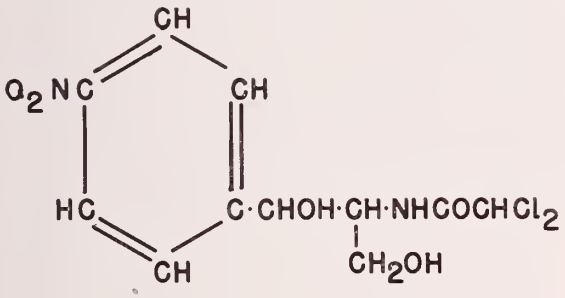
*West Virginia Medical Journal, 42:1 (1946).

Occurrence and Stability. — The trihydrochloride and sulfate are commonly available. The dry powder is stable at room temperature for 18 months, and no appreciable loss of potency is observed of solutions kept at room temperature for as long as a month.

Bio-assay and Standardization.—Although the original Waksman S unit and modifications of his bacteriologic bio-assay may be used for determining the activity of crude materials, commercial preparations are supplied in terms of gram weight of an equivalent amount of pure dry base so that it is of no consequence which of the available salts is used.

Local Action.—The agent is bacteriostatic and bacteriacidal against gram-negative bacterial wound infections. Since many organisms develop tolerance to the agent very rapidly, other antibiotics are considered better for local use.

Systemic Action.—As an antibacterial (bacteriostatic and bactericidal) agent, it is primarily active against gram-negative organisms and *Mycobacterium tuberculosis.* Bacteria that have acquired tolerance to streptomycin do not respond to dihydrostreptomycin. The material has



CHLORAMPHENICOL

considerably less neurotoxic effect than streptomycin, less histamine-like effect on the cardiovascular system, although it still may produce kidney irritation and allergic skin reactions in some patients.

Absorption and Distribution. Parenteral Administration.—Optimum effect is obtained by intramuscular injection. One gram (as free base) intramuscularly will produce blood levels as high as 30-75 micrograms/cc. Effective blood levels for as long as twelve hours can be obtained by this route. It cannot be given orally as it is not absorbed from the gastrointestinal tract, and on intravenous administration its excretion is so rapid that effective blood levels are difficult to maintain. No procedures for delayed absorption or delayed excretion (as are available with penicillin) are known. The pain of intramuscular injection can be minimized by using 1 per cent procaine hydrochloride as the diluent, restricting the total volume to 2 cc., and administering slowly only once per twelve hours deep into the region of the gluteal muscles.

Fate and Excretion.—After systemic administration, the material is highly concentrated in the urine within twenty-four hours, although excretion may be continued over a prolonged period of time.

Therapeutic Use.—Like streptomycin, the greatest use is as an adjunct to other measures in tuberculosis. It is not a definitive treatment in the disease nor a substitute for rest and other measures. It should not be used for minimal or primary pulmonary tuberculosis which responds readily to routine treatment. Since organisms rapidly develop tolerance to the agent, it should be reserved for the stage of treatment in which it may be most valuable. The following conditions may be mentioned as those in which it has produced very encouraging results:

Tuberculosis. 1. Intensive parenteral and intrathecal therapy for tuberculosis meningitis. 2. Acute hematogenous military tuberculosis. 3. Combined topical and parenteral therapy for severe tuberculous laryngitis and ulcerative tuberculous lesions of the oropharyngeal mucosa. 4. Progressive ulcerating lesions of the tracheobronchial tree that do not involve fibrous strictures. It is not certain in acute ulcerative tuberculous enteritis, genito-urinary tuberculosis, bone and joint tuberculosis, tuberculosis involving the eyes and skin, or tuberculous lymphadenitis where sinus formation is absent. Unless tuberculous pneumonia is present it is not primarily recommended for pulmonary tuberculosis. Diffuse, extensive, progressive lesions respond best although it may be of assistance for preoperative and postoperative treatment. It will often diminish spread of infection and reduce pain. Urinary Tract Bacteria Infections. If obstruction is not present and if organisms are susceptible, it is drug of choice due to diminished toxicity. Organisms should be antagonized by 16 mg./cc. or less in vitro if therapeutic usefulness is to be demonstrated. It is more effective in an alkaline medium, and systemic alkalinization of the urine may be indicated. It usually yields good results with *escherichia coli* infections and poor results with *Pseudomonas aeruginosa* and *Streptococcus faecalis.* Respiratory Tract Infections. Klebsiella pneumonia (Friedlander's) and *H. Influenzae* respond particularly well when the agent is given intramuscularly and

by aerosol. Old chronic infections may or may not respond. Meningitis. Conditions caused by *H. infuenzae, Bacillus proteus, E. coli, Ps. pyoeyanea* are eliminated when therapy with the agent is started early. Tularemia. Although the condition is not very common, dihydrostreptomycin is probably the drug of choice.

Dosage in Man.—The basic dose is 0.5 to 1.0 Gm. (as the free base) intramuscularly every twelve hours. In tuberculous conditions, this is given for 60 to 120 days. In urinary tract infections, up to 4.5 Gm. per day for four days may be given. In respiratory tract infections, administration is usually for about ten days, and in meningitis and tularemia until the desired response is obtained. It is available in sterile, rubber-capped vials containing the equivalent of 1 and 5 Gm.

Toxie Effeets.—Dihydrostreptomycin is less than half as toxic as streptomycin and about equally effective. On prolonged adminiistration it will still have some influence on the vestibular apparatus and produce a reduction in auditory acuity. The onset of a low-pitched tinnitus indicates the onset of nerve deafness for low tones; further dosage should be carried out with considerable judgment. Cardiovascular effects are very rare, although renal irritation (proteinuria, hematuria and occasional azotemia) may be observed in some individuals, particularly in those with some concurrent renal impairment. Skin or allergic reactions are infrequent and are usually controlled with antihistaminics. Uncontrollable side-effects usually disappear on withdrawal of the drug.

CHLORAMPHENICOL (Chloromycetin)

History.—1947. Burkholder demonstrated the antibiotic activity of extracts from *Streptomyees venezuelae.* Ehrlich and Bartz obtained the material in crystalline form. Smadel and Jackson indicated its activity against experimental rickettsial infections and other biologic studies followed rapidly. 1949. Rebstock, Crooks and Controulis synthesized the material.

Chemistry — D-(threo)-1-p-nitropheny 1-2-dichloroacetamido-1,3-propanediol.

(Formula)

Oeeurrenee and Stability.—Both the natural and synthetic forms of the drug are water soluable and stable at room temperature.

Bio-assay and Standardization.—Since the pure crystalline material is available, no bio-assay is needed and dosage is in terms of weight only. For experimental determination of the activity of impure or crude materials, a turbidimetric assay based on the repression of growth of Shigella paradysenteriae is available. It can be determined chemically by reduction with zinc diazotization and coupling with N-1-naphthylethylenediamine (similar to determination of sulfanilamide).

Aetion.—The agent is both systemically and locally active against many conditions caused by gram-negative and some gram-positive organisms and rickettsia but is not active against malaria, syphilis, generalized pneumococcus or streptococcus infections. The mechanism of action is not well established but is apparently through interference with the fat cycle in the bacteria; cellular respiration is not depressed although cell division is stopped. Chloramphenicol has almost no systemic action in man other than that due to its antibiotic action. It has no effect on hemopoesis. In very high doses in experimental animals it will produce primary respiratory depression followed by a secondary blood pressure fall to shock levels.

Absorption and Distribution. Oral Administration.—Although aqueous or propylene glycol solutions can be given parenterally, the agent is conveniently given orally since it is not destroyed in the gastrointestinal tract and is completely absorbed. Three grams by mouth in man will give a maximum serum level of 50 micrograms/ml. in two hours with 25 micrograms/cc. at the end of six hours and complete disappearance in twelve to sixteen hours.

Fate and Exeretion.—Only 3-8 per cent is excreted unchanged in the urine; the remainder is excreted as the inactive monoglycuronide. Certain small animals are also able to reduce the nitro group to an amino group, and some microorganisms possess enzymes: chloromycetinase A that hydrolyzes the amide linkage and a chloromycetinase B that reduces the remaining material to an arylamine. No procedure is available for prolonging the action of a single dose of chloramphenicol or for diminishing its excretion.

Therapeutie Use.—Limited clinical trials indicate that it is the drug of choice for the treatment of rickettsial infections (including epidemic typhus, typhoid fever, Rocky Mountain spotted fever), acute undulant fever and some bacillary dysenteries. It has also shown some promise in primary atypical pneumonia, whooping cough, psittacosis, scrub typhus, lymphogranuloma, and some urinary tract infections. It has particular promise for the widescale treatment of organisms, such as some gonorrhoea, that have developed resistance to other antibiotics and sulfonamides.

Dosage in Man.—An initial oral dose of 50 mg./Kg. is followed with 200 to 300 mg. every 2-4 hours until the patient's temperature has been normal for four or five days. Many patients become afebrile in two or three days. The drug is available as 250 mg. capsules.

Toxic Effects.—At present no cause for withholding or withdrawing the drug is known except for conditions caused by nonsusceptible organisms.

AUREOMYCIN HYDROCHLORIDE (Duomycin)

History.—1948. Duggar demonstrated the antibiotic activity of extracts of *Streptomyces aureofaciens.* 1949. Broschard, Dornbush, Gordon, Hutchings, Kohler, Krupka, Kushner, Lefemine and Pidacks crystallized the antibiotic.

Chemistry.—Although the structural formula has not been elucidated, aureomycin is a weakly basic compound which contains both nitrogen and nonionic chlorine. The hydrochloride is water soluble.

Occurrence and Stability.—The yellow crystalline hydrochloride is stable while dry, but solutions are reliable for only two days even though refrigerated and buffered.

Bio-assay and Standardization. — Commercial preparations are supplied in terms of gram weight of the crystalline hydrochloride and no bio-assay is necessary. Bacteriologic assay methods are available for determining concentrations over 0.6 micrograms/cc. of serum.

Action.—The agent is bacteriostatic and bactericidal against many gram-positive and gram-negative bacteria and rickettsia. It is active against most gram-positive organisms at 1 microgram/cc. (in vitro), most gram-negative organisms and staphylococci at 25 micrograms/cc. but against *Proteus vulgaris* and *B. pyocyaneus* only at many times this level. It is active against organisms that have developed penicillin, streptomycin, or sulfonamide resistance.

Absorption and Distribution. Oral and Parenteral Administration.—The agent can be given conveniently orally. Doses of 1 Gm. every six hours produce plasma levels of about 2 micrograms/cc. with the maximum level maintained from the second to eighth hour after administration. Intramuscular injection, if indicated, can be made considerably less painful by using 1 per cent procaine hydrochloride solution as the solvent.

Fate and Excretion.—The material is highly concentrated in the urine, although excretion may be continuous for two or three days following a single dose.

Therapeautic Use. —One of the primary important uses is in the treatment of conditions caused by organisms that have developed resistance to penicillin, streptomycin, or the sulfonamides. It is highly active against rickettsial infections (Rocky Mountain spotted fever, Q fever, typhus, rickettsialpox, lymphogranuloma venereum, and psittacosis), with considerable activity in acute brucellosis, primary atypical pneumonia, and coli- aerogenes infections of the urinary tract or peritoneum. Its activity against salmonella infections (including typhoid fever) has not been established, and against penicillin-sensitive gram-positive cocci, the use of penicillin is indicated. It has no demonstrated value in virus infections or those caused by *P. vulgaris* or *Ps. aeruginosa.*

Dosage in Man.—Initial dosage should be adequate. Orally, with severe infections, 50-100 mg./Kg. should be given per day in divided doses. Dosage may often need to be prolonged for 5 to 14 days, depending on clinical response. In milder infections 25-50 mg./Kg. per day may be given. It is available as 250 mg. capsules.

For ophthalmic purposes, a solution of the borate (5 mg./cc.) may be applied topically every two hours for forty-eight hours or longer in staphylococcic, pneumococcic and influenzal conjunctivitis and similar conditions. Available in 25 mg. bottles with buffer added and requiring only the addition of five cc. distilled water.

Toxic Effects.—A not particularly severe nausea is fairly common as is minor diarrhea. It is possible that allergic phenomena may be observed which will require treatment with antihistaminic drugs, or if severe enough, by withdrawing the antibiotic. Doses as high as 500 mg./Kg. per day have been given in a few individuals, without untoward effects.

BACITRACIN

History.—1945. Johnson, Anker and Meleney recovered the antibiotic from a strain of *B. subtilis.* 1948. Barry, Gregory and Craig found that the antibiotic is a polypeptide.

Chemistry.—A polypeptide containing predominantly phenylalanine, leucine, isoleucine, glutamic acid, aspartic acid, lysine, histidine and crystine.

Occurrence and Stability.—Commercially available preparations are light tan powders that are freely soluble in water with an activity of 30-40 units/mg. (Fifty-seven units per mg. is the maximum that has been obtained.) The preparations are filtrable through Berkefeld filters and are stable for 15 minutes at 100° C. The dry

material in sealed vials is stable at least 18 months at room temperature. Solutions should not be kept longer than three weeks when stored in refrigerator.

Bio-assay and Standardization.—Several bacteriologic bio-assays are available—both cylinder plate methods and turbidimetric procedures that will detect as little as 0.02 units of bacitracin/cc. using *hemolytic Streptococcus or Staphylococcus aureus* as the test organism.

Local Action.—Active against many gram-positive streptococci and staphylococci, as well as pneumococcus, gonococcus, meningococcus, *Endamoeba histolytica* and *Spirochaeta pallida.* Inactive against most gram-negative organisms. Not inactivated by blood, pus, necrotic tissue, or penicillinase. No "bacitracinase" has been encountered. Not irritating on local administration.

Systemic Action.—Active systemically and with prolonged duration, but not used systemically at present due to the possible hazard of producing nephrotoxic effects in the kidney which have been observed in small animals.

Therapeutic Use.—Highly active in inhibiting bacteria in carbuncles and other localized infections including infected and nonhealing wounds. It is also useful in external ocular infections.

Dosage in Man.—It may be infiltrated into and around a wound, or applied by wet dressing at optimal concentration of 500 units/cc. Available in 20 cc. vials containing 2,000, 10,000 and 50,000 units, as 500 unit/Gm. ointment and 500 unit/Gm. ophthalmic ointment.

Toxic Effect.—When used locally there may be an insignificant incidence of allergic response. The drug should be infiltrated with great caution in individuals with concomitant renal impairment. It should not be used for systemic infections.

GRAMICIDIN

Although gramicidin is one of the oldest known and most potent antibiotics, it has received little commercial attention until recently. Poorly soluble and highly toxic systemically, it has been difficult to use. Recent prepartions have enhanced chemotherapeutic activity by the addition of dispersing or surface tension lowering agents for topical use only. Preparations are available for use as cough drops (0.25 mg. troches), with added vasoconstrictor for use in the nose (0.005 per cent solution) and as an ointment (0.25 mg./Gm.) for use in superficial skin conditions such as impetigo or infected dermatitis.

AEROSPORIN

Early strains produced a nephrotoxic factor along with antibiotic material.

POLYMIXIN

It has high activity against gram-negative organisms and has the advantage that microorganism resistance does not develop, but the polypeptide material produces renal tubular dysfunction and is not suitable for clinical use in its present form.

CONCLUSIONS

Although penicillin has been improved by the introduction of dosage forms with prompt but longer duration of action, and streptomycin by the introduction of a derivative that is less neurotoxic, major advances have been made with the development of new agents such as chloramphenicol and aureomycin that are active against infections by organisms that were not susceptible to antibiotic therapy. The discovery of agents that will attack rickettsia, which may be looked upon as the transition forms between bacteria and viruses, leads to the hope that agents will be found that will attack the viruses that infect man and animals.

BIBLIOGRAPHY

Numerous excellent publications in medical, chemical, and other scientific journals are available. More and more clinical papers are in the process of being published. The following three references are given only as an indication of the type of clinical investigations currently being carried out.

1. Woodward, Smadel, Ley, Green and Mankikar: Ann. Int. Med. 29:131 (1948).
2. Meleney and Johnson: J. A. M. A. 133:675 (1947).
3. Bryer, Schoenbach, Chandler, Bliss and Long: J. A. M. A. 138:117 (1948).

DRUG ERUPTIONS IN CHILDREN

Drug eruptions in children, besides urticaria, probably did not play too great a role or did not receive enough attention until the advent of sulfonamides. Then the practitioner and the pediatrician became aware of them. It is not only the sulfonamides and penicillin that may cause these rashes. Any and every drug may do that.

When a skin eruption looks strange or odd so that it does not fit into a given catagory, or if it shows simultaneously signs of different dematoses, think of a drug rash, especially if this rash develops while the patient is under your care. It may look like measles, scarlet fever, or erthema nodosum, or acne, or erythem multiforme. But if one looks more closely, it does not look exactly like one of these conditions—measle-like, but no Koplik's spots, and perhaps an urticarial component which is not seen in measles. Another case may look like erythema multiforme at first sight, but the experienced observer notices a brownish pigmentation. This is not encountered in true erythema multiforme, but is very suggestive of an erythema-multiforme-like drug eruption.

Pediatricians have an easier job in finding out what drug was the cause, because children usually take fewer medicines. A check list of the common drugs and home remedies comes in very handy at times.—Stephan Epstein, M. D., in Journal-Lancet.

INTRAVENOUS PROCAINE IN ORTHOPEDICS*
(Personal Observations and Review of the Literature)

By ATHEY R. LUTZ, M. D.,
and
CARMALA J. SOLOMON, M. D.,
Parkersburg, W. Va.

HISTORY

Procaine hydrochloride, following its introduction in 1905, has been used largely as a local anesthetic agent. In 1908, Bier, of Germany, reported its use intravenously for the first time. He injected procaine into a superficial distal vein of an extremity after the blood had been drained from it by an Esmarch bandage and a tourniquet applied. This prevented the flood from re-entering the limb and the procaine from entering the general circulation. A little later vasopressors were aded and some deaths did result following the intravenous injection of procaine. In these cases, it was suggested that death was due to the epinephrine in the procaine-epinephrine solution rather than to the procaine alone.

In 1940, Lundy, of the Mayo Clinic, reported the use of intravenous procaine with relief of pruritis of jaundice. He gave 1 Gm. of procaine in 1 litre of saline by continuous intravenous drip over a period of hours. In 1943, Major R. A. Gordon, R.C.A.M.C., reported 10 cases of burns given transportation and dressing with the use of intravenous procaine in a 1/5 of 1 per cent solution, that is, 1 Gm. of procaine to 500 cc. of saline. In each case relief of pain was obtained in a few minutes after the infusion was begun, without any signs of untoward reactions. Since then, it has been used in conjunction with general anesthesia and as an adjuvant with post-operative sedation for more complete relief of pain. This has been done mainly in Canada and in the United States. In 1945 and 1946, Allen, of New York, described its application in obstetrics. Beginning in 1947, Graubard and his co-workers at the New York Post-Graduate Medical School and Hospital, have reported its use in arthritis, fractures and many other orthopedic problems. As a matter of interest, French workers have been studying its value in asthma, pulmonary embolism and angina.

PHYSIOLOGY AND PATHOLOGY

Inflammation is the most important of all pathologic processes and is the reaction of tissue to an irritant, be it chemical, physical, or bacterial. There are three main phases of inflammation: (1) vascular changes, (2) inflammation exudate and (3) repair. The functional control of the blood vessels depends in part on nerve impulses and in part on the effects of hormones and other substances in the blood. Any irritation of the nerves of the skin, muscles and blood vessels produces a vasospasm, a phenomenon which plays an important role in the mechanism of pain. The reflex may spread centrally to involve entire limbs, and it has been reported that renal anoxia was found following trauma of an extremity as a result of the stimulation of the sympathetic nerves of the extremity.

The burning, throbbing pain experienced in trauma and inflammation is purely sympathetic in character. Why chemical block or surgical section of sympathetic fibers should eliminate the pain originating from the injured sensory nerves is not clear, since sympathetic nerves in the extremities are said not to contain afferent fibers.

The humoral imbalance existing at an irritable focus depends upon the libration of the histamine or histamine-like substances from the immediately affected cells, directly causing dilatation of the capillaries with which it comes in contact, and acting as a persistent stimulus to the sensory endings of the terminal axon branchings. It is this excess of histamine or histamine-like substance which acts in the nerve fibers to the terminal arterioles by depressing acetylcholine.

The effectiveness of intravenous procaine therapy in the pathologic state is based on the permeability of the capillary membrane to colloid as well as to ions. Therefore, the procaine effect will be concentrated in the inflamed areas.

PHARMACOLOGY

Procaine is para-aminobenzoylidiethylaminoethanol, soluble in one part of water, and is stable. When given intravenously, two processes are initiated:

(1) Hydrolyzation of procaine by an enzyme into para-aminobenzoic acid and diethylaminoethanol.

(2) Acetylation of para-aminobenzoic acid.

Nearly 95 per cent of injected procaine can be found in the urine as one or another of hydrolytic products and has been shown to be removed from the blood stream by the kidneys in twenty minutes.

The belief is that procaine acts in two ways in traumatized or inflamed areas: (1) direct action on irritated nerve fibers and (2) indirect action by procaine or one of its derivatives,

*Presented by Doctor Lutz before the Tri-State Orthopedic Society, White Sulphur Springs, West Virginia, April 22, 1949.

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

diethylamino-ethanol, on the endothelium. Structurally, diethylamino-ethanol resembles benadryl and may have a similar antihistaminic effect.

Graubard and his co-workers developed the use of "procaine units" because of the toxicity of procaine. In experimental animals 40 to 60 mg. per kilogram in the rabbit, and 40 mg. in the guinea pig were found to be the lethal dose. The lethal dose in man is not known. In order to stay below the lethal dose, they used the dosage of benadryl in children, that is 4 mg. per kilogram of body weight, because of the resemblance between diethylamino-ethanol and benadryl. The dilutions used have been 1:1000 and 1:500 units, with the 1:1000 solution being preferred. It is usually diluted with normal saline, but can be diluted with 5 per cent glucose in water if saline is contraindicated. Graubard employed the 1:1000 solution, giving the required dose in twenty minutes. This was done because in twenty minutes procaine cannot be identified as such or as para-aminobenzoic acid in the blood. They used a flowrator for accuracy but in our infusion we use a Murphy drip with a clamp. With experience, a fair accuracy can be obtained. Mentioning doses, we have given as much as 1000 cc. of 1:1000 solution for those cases in which we wanted prolonged analgesia without any unusual reactions.

Some observers use a barbiturate before an intravenous procaine infusion but in our experience and in the experience of others a barbiturate is not necessary. In over 4,000 cases reported no dire side-effects nor deaths have resulted from an infusion of procaine. But caution is advised in the procedure.

Before discussing its clinical application, one might mention some of the signs and symptoms observed during an infusion and the complications that might occur. A few minutes after the infusion is started, a patient may get tingling and numbness in the arm in which the infusion is given. At times, the numbness may spread to the other extremities. The patient may experience a feeling of warmth, sometimes, with lightheadedness. One should try not to exceed the dosage preducing these symptoms. Many patients feel comfortably relaxed with the alleviation of the pain.

COMPLICATIONS

Two types of complications are found: (1) central nervous system symptoms with dizziness, apprehension, trembling, thick speech, mental confusion and muscular twitchings which precede convulsive seizures or coma and (2) circulatory symptoms with signs of collapse, clammy skin and thready pulse.

Intravenous pentothal, or sodium luminal intravenously quickly corrects the severe complications. If the symptoms are mild, one can readily control them by cutting down the flow of procaine or discontinuing the infusion.

One can often exclude sensitivity to procaine by asking the patient if he has had any form of local or spinal anesthetic with reaction or one can use the skin test. This is done by injecting 1 cc. of 1 per cent solution intradermally. In sensitive people a marked local reaction with systemic signs of dyspnea and agitation occurs. Lundy considers the systemic signs only as a positive sign.

CLINICAL APPLICATION

(1) As a anesthetic or analgesic Agent.

Kraft used procaine intravenously in conjunction with various types of anesthesia in 8 per cent of reported cases for all types of surgery. The age range was from 8 to 79 years. It is being used in many other hospitals also, especially with cyclopropane to control the cardiac arrythmias which often occur with it. We have been using it in poor surgical risk cases which require surgery, especially in older people with fractured hips and peripheral vascular disease requiring amputation. One thousand cc. of 1:1000 solution was started one-half hour prior to surgery and no preoperative sedation used. At least 200 to 300 cc. of the solution was given prior to surgery. The infusion was continued during the operation and a small amount of sodium pentothal was given intravenously during the most painful period of the operation. Postoperatively, the amount of necessary sedation was markedly reduced and in many cases opiates were not required.

Lately, we have been giving 1000 cc. of 1:1000 solution a few hours after surgery to control severe pain following ruptured intervertebral discs or spinal fusions. This has given greater relief of pain and better relaxation and may be repeated the following day. In many other cases requiring continued opiates for relief of pain, intravenous procaine has been very beneficial.

(2) For Relief of Pain.

a. Low back pain.

Intravenous procaine, using the procaine units, was used in different types of low back pain. We have found it to be of value in acute myositis, fasciitis and painful hypertrophic arthritis. The severe cases of acute myofasciitis may require a

daily infusion for two or three days. Osteoarthritis usually requires more. No relief of pain was obtained in cases with nerve root irritation, as ruptured intervertebral discs, since the procaine acts at the site of injury and not on pain arising from purely mechanical origin.

b. Subdeltoid bursitis.

We have been giving the "procaine units" in conjunction with deep x-ray therapy for relief of pain in cases of acute subdeltoid bursitis. We found that the procaine promoted early active and passive exercises, decreased the recovery period and gave greater relief of pain. Intravenous procaine given after manipulation of so-called "frozen shoulders" seemed to give more complete alleviation of pain.

c. Acute fracture.

1. Graubard, Robertazzi, Ritter and Peterson report immediate relief of pain in all postreductive cases to a greater or lesser degree. They noted, also, a marked reduction in swelling. They report evidence of early callus formation in some instances and this is still under their investigation. Our experience in these cases has been limited but we have not as yet obtained the result they have reported.

2. Graubard and his co-workers have used procaine in many types of spastic cases. They report that it increases mobility, decreases spasm and increases muscular coordination. They have used it mainly in cerebral spastics with good results. They have used it to control spasticity of acute poliomyelitis with decrease in muscular pain.

CONCLUSIONS

(1) Intravenous procaine infusion is a safe hospital procedure provided that the administration is controlled and one has a thorough knowledge of its complications.

(2) The indiscriminate and careless administration of procaine intravenously may prove dangerous.

(3) In selected cases intravenous procaine will give immediate and welcome relief from acute low back pain and acute bursitis. Used in conjunction with other routine sedation it gives greater relief from severe postoperative pain. Our experience with this procedure leads us to conclude that the enthusiasm of some investigators in the use of procaine in this manner is unwarranted, that similar results can be obtained by other methods, and that we desire further investigation before recommending it as an absolutely necessary armament in the practice of orthopedic surgery.

REFERENCES

1. Graubard, D. J., Robertazzi, R. W., & Peterson, M. C.: Intravenous Procaine: A Preliminary Report, New York State J. Med., (to be published).
2. Dale, H. H.: Some Chemical Factors in the Control of the Circulation. Lancet, 1: 1, 179, 1,233, 1,285, 1929.
3. Lewis, T.: The Blood Vessels of the Human Skin and Their Responses, London, 1927, Shaw & Sons, Ltd.
4. Bach, L. M. N.: Production of Acetyl Choline in Antidromic Vasodilatation, Am. J. Physiol., 145:478, 1946.
5. Livingston, W. K.: Post-traumatic Pain Syndrome: An Interpretation of the Underlying Pathological Physiology, West. J. Surg., 46:341, 426, 1938.
6. Livingston, W. K.: Pain Mechanisms, New York, 1942, The Macmillan Co.
7. Stead, E. A. Jr., & Warren, J. V.: The Effect of the Injection of Histamine into the Brachial Artery on the Permeability of the Capillaries of the Forearm and Hand, J. Clin. Investigation, 23:279, 1944.
8. Findley, G. M.: Histamine and Infection, J. Path. & Bact., 31:633, 1928.
9. Fine, J. & Seligman, A. M.: Traumatic Shock, VII., J. Clin. Investigation, 23:720, 1944.
10. Evans, J. A.: Sympathectomy for Reflex Sympathetic Dystrophy, J.A.M.A., 132:620, 1946.
11. Graubard, D. J., Robertazzi, R. W., & Peterson, M. C.: A method for accurately measuring the rate of intravenous fluids, Anesthesiology (to be published).
12. Graubard, D. J., Kovacs, J., Robertazzi, R. W., & Peterson, M. C.: The Management of Arthritis by Means of Intravenous Procaine. A Preliminary Report (to be published).
13. Graubard, D. J., Kovacs, J., & Ritter, H. H.: The Management of Destructive Arthritis of the Hip by Means of Intravenous Procaine (to be published).
14. Kraft, K. A.: Intravenous Procaine, Canada M. A. J., October, 1947, Vol. 57.
15. Gordon, R. A.: Canad. M. A. J., 1934, Vol. 49.
16. McLachlin, J. A.: Canad. M. A. J., April, 1945.
17. Allen, F. M.: Arch. & Phys. Med., December, 1945.
18. Graubard, D. J., & Ritter, H. H.: Am. J. Surg., November, 1947, Vol. 74.
19. Graubard, D. J., Robertazzi, R. W., & Peterson, M. C.: New York State J. Med., October, 1947, Vol. 47.

CARCINOMA OF THE COLON

Cancer of the colon occurrs at any age, but more often between 50-70 years. Blood in the stool (68-70 per cent of cases in lesions of the left bowel), alternating attacks of diarrhea or change in bowel habits, and crampy abdominal pain all are alarming symptoms which are almost pathognomonic of the condition, and we must caution that they may be relatively late, but not by any means hopeless symptoms.

We must urge more x-ray examinations of the colon by the radiologists, and we must search out and catalog clinical and physical phenomena which will help to identify this malady earlier than we have been able to detect it before.—Jack C. Norris, M. D., in J. Med. Assn. Georgia.

PRESENT TRENDS IN PSYCHIATRIC THERAPY*

By JAMES K. MORROW, M. D.
Radford, Va.

The present resources of psychiatry can be best evaluated against a background of their history. Psychiatry has been a late development in medicine. The subject has grown so rapidly and in so many directions that it is difficult to orient oneself without a brief look at the past.

The organic branches of medicine developed much earlier. Some of the basic facts in these fields had been known for hundreds of years. Then Leeuwenhoek's microscope made possible a series of discoveries about cellular structure, bacteria, et cetera, which led to the development of such sciences as histology and bacteriology while psychiatry was still in the dark ages. Throughout the nineteenth century the organic approach to medical thought was predominant. We came to know more and ever more about cells and tissues, bacteria and drugs, but we still knew almost nothing about mental disorders.

Toward the end of the nineteenth century many names appear which are mileposts of psychiatric knowledge. Perhaps the two greatest are those of Kraepelin and Freud. It is not fashionable in this day of dynamics to say much about our great debt to Emil Kraepelin. Nevertheless, he paved the way for the development of modern psychiatry. Through his painstaking longitudinal life studies he established the symptomatology, course and prognosis of several principal mental disorders. His delineation of general paresis is no less a classic than is Laennec's description of pneumonia. He first showed that the "mania" and "melancholia" of that day were really successive phases of a manic-depressive psychosis. He described dementia praecox, which we now prefer to know by Bleuler's term, "schizophrenia", accurately and well.

We owe a great debt also to Sigmund Freud. Where Kraepelin had been preoccupied mainly with description, Freud was interested in dynamics. He focused his attention almost entirely on investigation of the psychic forces which eventuated in mental disorder. Though many of his concepts are still matters of controversy, his dynamic approach to psychiatric problems has influenced our thinking to a vast degree.

Little can be said here about the later developments and refinements of psychologic investigation and psychotherapy. The subject is far too ambitious for any short discussion. It can be only mentioned that there have been many additions to our knowledge in this field. More recent developments include abbreviated analytic therapy, group psychotherapy, hypnoanalysis and narcosynthesis, as well as many others.

Discoveries in the field of physical and chemical therapies have been considerably later than those just mentioned and their history is less generally known. Even von Jauregg's discovery that artificially induced malaria improves general paresis dates only to 1917. The fever cabinets which produce a similarly effective fever have been developed since 1930. It was in 1933 that Manfred Sakel, in Vienna, while using insulin in drug addition, noted that schizophrenics improved after accidental insulin shock. Shortly afterward, von Meduna, in trying to cure schizophrenics with convulsions induced by metrazol, discovered that his method, though only moderately helpful in schizophrenia, gave almost uniformly good results in depressive states. Cerletti and Bini, in 1938, found that similarly effective convulsions having definite advantages could be produced safely by an electric current. It was in the early 1930's too that Egas Moniz, in Portugal, following his observations of the effects of frontal lobe tumors, devised the operation of prefrontal lobotomy. This group of discoveries coming in rapid succession has changed psychiatry from a tedious and often hopeless field of medical endeavor to one of hopeful outlook and constant change. It has also stirred up controversy. Some psychiatrists, preoccupied with the psychologic approach, have feared that the "shock" therapies were short circuiting our psychiatric knowledge and tending to make psychiatric therapy oversimplified and mechanical. Actually, the treatment of psychiatric patients is still a difficult enough matter to call on every resource we possess. A brief look at common conditions with which we must deal will best indicate just where we stand today in psychiatric treatment.

General paresis still accounts for 5 to 10 per cent of public mental hospital admissions. After von Jauregg's discovery, artificial fever became an essential part of the treatment of paresis. Since the appearance of penicillin, the picture has changed. Just now the question of whether or not penicillin plus malaria is better therapy than penicillin alone is unsettled. The literature is voluminous without general agreement. One thing, however, is certain: we are no longer in the position of having to choose between malaria and nothing when the physical risk is bad. Nowadays, if the patient is robust he may have both malaria and penicillin; if he is a poor risk for

*Presented before the Mercer County Medical Society, at Bluefield, March 29, 1949.

fever, penicillin still offers him a fair chance of substantial improvement. There is still no agreement about the total optimum dosage of penicillin, though the trend is to give larger and larger amounts. Eight to ten million units is not an uncommon total dosage. There is some evidence that the maintenance of quite high blood levels may be more important than the total time consumed in treatment. The prognosis in paresis today is difficult to state. In the general run of public mental hospital patients, perhaps one-third can achieve a remission or very marked improvement. Much higher remission rates are naturally reported where early cases are treated. The treatment of paresis is still not altogether satisfactory; the real solution lies in prevention.

In the affective disorders—the involutional psychoses, manic-depressive psychoses and other depressions—one new mode of treatment, electric shock therapy, has completely changed the picture within the last decade. Manic-depressive states are of great importance. They represent the second largest diagnostic group in public mental hospitals. These patients have recurrent attacks of depression or of mania throughout life, each attack ending in remission, usually after several months. Though we can be fairly conservative because of the tendency to natural recovery, there are grave risks inherent in allowing the attack to run its course, principally the danger of suicide in the depressed state and of exhaustion or injury in the manic phase. The depressive phase is almost uniformly relieved with electric shock therapy, almost 90 per cent of cases achieving a remission after six or eight treatments. Suffering can be prevented, the necessity for commitment avoided, economic loss minimized and the hazard of suicide almost eliminated. In the manic phase the situation is a bit different, but electric shock therapy is of great value here also. More treatments are required—twelve to fifteen or more—and a faster schedule of treatment is necessary in order to secure a cumulative effect. The severity of the excitement can be greatly reduced in a matter of days. There is less uniformity of improvement than in the depressed state and liability to relapse is greater, so that somewhat longer hospitalization is necessary than in the depressions. Even so, the duration and severity of the attack are greatly reduced.

Involution melancholia is a more serious matter. The depression here is of an agitated type with a much more acute risk of suicide. The duration of the disorder is much longer and many cases, if not treated, will become chronic and permanent. Nearly 90 per cent of these depressions also can be completely relieved with electric shock therapy. They respond almost as do the manic-depressive depressions. Hospitalization in these cases can be reduced from months or years to weeks.

There are other involution psychoses in which paranoid or persecutory ideas are prominent. Here the problem is somewhat more complicated. The diagnosis itself is always in some doubt. Some of these patients are so much like paranoid schizophrenics that it is debatable whether the psychosis is of involutional origin. Electric shock treatment can be given these patients first, because a fair proportion will improve. We keep in reserve the use of insulin shock for those who do not otherwise respond. The outlook in these patients is not so uniformly good as in the real melancholias, but a large percentage of them can be helped.

There is one other important group of involutional patients. It is comprised of those whose primary trouble is not involution at all. They are potential neurotics in whom the added stress of the menopause has caused the neurosis to become manifest. Electric shock will not help these people except sometimes to relieve some of their depression. They have to be treated in the same way as neuroses encountered elsewhere. Neither electric shock, hormone therapy, nor any other specific is a solution for their neurosis.

We have learned since the advent of electric shock treatment that not all conditions occurring in the aged are organic. Some are neither senile nor arteriosclerotic, but are functional depressions. In cases in which the physical state permits the use of electric shock the response is quite like that in other depressions.

In all these affective conditions, the present trend is toward the use of electric shock therapy. Psychotherapy in such states labors under the handicap that we actually know little of their causes or mechanisms. We do know that involution psychoses most often develop in persons of certain attributes – rigidity, perfectionism, stinginess – and that patients who suppress aggressive and hostile feelings are apt to turn these in on themselves finally and go into a depression. Unfortunately, this knowledge is not of great help in treating a really acute depressed state. The patient is inaccessible to psychotherapy and is apt to attempt suicide if more active treatment is delayed. The best time for psychotherapy, looking toward preventing a recurrence of the psychosis, is after shock treatment has relieved the immediate attack.

Schizophrenia remains one of our greatest and most stubborn problems. There are more schizo-

phrenics admitted to state hospitals than any other type of patient. We still know relatively little about this condition. When Kraepelin described dementia praecox he was thinking primarily of the cases which occurred in young people whose behavior deteriorates rapidly and who have an almost uniformly bad outlook. Nowadays, we include also in the schizophrenic reactions patients in whom similar symptoms develop at a later age, usually with a somewhat better prognosis. Whether the condition is actually a diagnostic entity, and what the etiologic factors may be we still do not know. The psychologic approach will show a pathologic development dating from early childhood. The biologist, however, can just as easily show aberrations throughout the physical development of the schizophrenic. The basic defect is still unknown. Treatment of schizophrenia in recent years has been mainly by insulin shock and electric shock. Insulin came first and still seems to be the best treatment for those cases in younger people which begin insidiously and have a progressive and discouraging course with rather marked disturbances in body function. Such patients are usually given at least twenty to twenty-five daily deep insulin shocks. Electric shock therapy is useful mainly in the rather acute schizophrenic reactions which come on more suddenly, sometimes in older people. Electric shock alone may bring about a satisfactory remission in these cases. Many physicians are using a combination of the two methods in serious and progressive cases. It is possible to arrest the process in more than 50 per cent of schizophrenics, though individual prognosis varies greatly and depends particularly on the duration of illness, the age at onset, the degree of maturity attained before it began and the quality of the personality before the illness.

Other methods of treatment of schizophrenia also have a place. "Total push therapy" in which we make use of every possible means to urge the patient back toward normal habits of living is of considerable importance. Psychologic methods have their place, though they are not as well established. Recently, there have been claims of good results with analytic therapy. The criticism here is that the total number of cases reported has been too small to justify any conclusions. Many times we cannot bring about a complete return to a normal level in a schizophrenic, but must settle for a lower level of adjustment in which the patient can live peaceably outside an institution but cannot assume adult responsibilities. For persistent cases which do not improve with treatment but do retain considerable emotional drive, the operation of prefrontal lobotomy will sometimes make possible a life outside an institution. Therapy of schizophrenia is much more effective than it was 20 years ago, but it still leaves much to be desired.

The psychoneuroses remain a tremendous problem, both to the psychiatrist and to the general practitioner. Treatment is difficult and there is room for every form of therapy we possess. These patients vary all the way from those with mild disability who can be handled adequately by the family doctor to those with severe disability who need intensive treatment in a psychiatric hospital. The trend today is to apply every possible technic which will help these people to understand the origin of their symptoms, to think logically about them and to take a large part of the responsibility with the physician's assistance to work toward recovery. Much of the criticism of the "shock therapies" has been directed against their use in the neuroses. Inasmuch as a neurosis is basically a faulty group of reaction patterns, no form of shock therapy is a cure. Nevertheless, these methods do have their place as adjuncts to the psychotherapy which is the essential form of treatment in these states. For example, in anxiety states the daily use of subshock doses of insulin to produce languor, sweating and relaxation is of definite value to overcome acute anxiety and to facilitate further investigation of the psychic difficulty. In psychoneurotics when depression is an acute problem electric shock therapy often will relieve the depression temporarily so that other measures can be carried out. It is essential, however, that shock treatment never be held out as an actual cure for the neurosis. It is rather a means of reducing some immediate symptom which is interfering with psychotherapy. It compares perhaps with the use of suggestion or hypnosis in conversion hysteria which will eliminate a specific hysterical symptom but will not alter the immature, emotionally unstable personality in which hysterical symptoms are apt to appear. There is sometimes a field for electric shock, too, in the treatment of severe obsessive and compulsive states. Some of these are extremely refractive to psychotherapy. Electric shock therapy to a point of utter confusion may result in relief of some of the symptoms. Some of these states are so serious that they may ultimately justify the use of so radical a technic as prefrontal lobotomy. In general, however, the basis of therapy in neurotic patients is still one or another form of psychotherapy. The advent of other therapies has not changed this fact.

The pendulum of thought in psychiatry has swung a long way. In the early days of psycho-

analysis psychotherapy was the center of attention. In more recent years the brilliant successes of the shock therapies have shifted the emphasis toward the physiologic approach. Actually, the therapeutic optimum embraces both of these extremes. Adolf Meyer's concept of the whole person as a functioning unit is still valid. There is room for any therapeutic approach in psychiatry which offers reasonable hope of success.

CONTROL FOR CORTISONE

The importance of the hormone from the adrenal cortex, first called Compound E but now known as cortisone, in the treatment of rheumatoid arthritis is indicated by the recent appointment of two new national committees to control the allocation of this rare chemical and to study its usefulness in the treatment of arthritis and other diseases.

Dr. Philip S. Hench of the Mayo Clinic, pioneer in the use of the hormone for rheumatoid arthritis, will head the Advisory Committee on the Research Program against the Rheumatic Diseases which has been appointed by Surgeon General Leonard A. Scheele of the United States Public Health Service. Dr. Hench's Committee will study also the ACTH hormone of the pituitary gland which also aids patients with rheumatoid arthritis.

Simultaneously, the National Academy of Sciences has appointed a Committee to allocate cortisone among research physicians in a plan similar to the control of penicillin and streptomycin, when these drugs were rare and scarce. Dr. Chester S. Keefer of Boston will be chairman of this control committee and thereby continues his well-merited role of scientific "Judge" to decide where, when and how cortisone can be distributed during its current pioneer period.

Serving on both these very important committees is Dr. Robert Loeb of the College of Physicians and Surgeons of New York. Appointed also to the committee on cortisone allocation is Dr. Hans T. Clarke, Professor of Biochemistry at the College of Physicians and Surgeons.

The current cost of cortisone as announced by Merck and Company has fallen to $60 for a 300 millogram vial which contains three average daily doses. This decline from $100 to $200 per patient per day for cortisone typifies the advances in manufacturing techniques which rapidly lower costs and follows the price pattern of penicillin and streptomycin from their days of initial scarcity.

Merck plans to supply Dr. Keefer's allocation committee with about 200 grams of cortisone per month, beginning in August, or a total of 1000 grams for the remainder of 1949, but it is emphasized that no part of this amount will be available for public sale at the present time. Physicians—for many months to come—will have the difficult task of explaining to their patients with rheumatoid arthritis that they must wait to receive the benefits of cortisone.—New York Medicine.

TUBERCULOSIS ABSTRACTS*

OLDER AGE GROUPS

Mortality statistics compiled for 1947 show that tuberculosis death rates have again declined in the United States. In 1947 the rate was 33.5 per 100,000, as compared to 36.4 in 1946. These gratifying figures show progress is still being made toward the goal—the disappearance of tuberculosis from the United States.

An analysis of the 1947 mortality data brings out a fact which is very significant. The proportion of deaths from tuberculosis among people over 45 years of age is steadily increasing.

For many years tuberculosis was a disease primarily of young adults between the ages of 15 and 44—people in the prime of life, wage earners, parents of small children, young people just starting their life work. In 1900, for example, almost two out of three of all the reported tuberculosis deaths were in this age group. Only one out of four of those who died was 45 or over. By 1940, over half of the tuberculosis deaths reported still took place among people between the ages of 15 and 44, but deaths of those 45 and older had risen to 42 per cent of the total.

An important factor in this shift has been the fact that mortality rates have declined more slowly in the older age groups than in the younger and the greater number of older people in the country's population further accentuates the degree of change.

The shift toward older ages at death has great significance for tuberculosis case-finding activities. A Georgia county contains one of the few available tabulations of the ages of those x-rayed. It was disappointing to see the small percentage of older people who took part in that survey. Although 62 per cent of the population of the county in the age group 45-54 were x-rayed, the percentage fell rapidly in older age groups; only 17 per cent of those 75 and over participated.

Obviously there are many reasons why people do not take part in mass surveys. Many of the very old people could not participate because of illness or incapacity. Many others not so old, however, failed to be examined because they think tuberculosis is a disease they have "outgrown." They must be cautioned that those over 45 are subject to tuberculosis just as younger people are.

Control workers should be remined that older people form a major source of infection in the population. Special efforts are needed to discover the disease among those over 45 for the protection both of individuals and of the community. All men and women, young and old, should be urged to have periodic x-ray examinations either in mass surveys or as part of their annual physical examination by private physicians. Only by special emphasis and special efforts can all cases of tuberculosis be discovered, isolated, and brought under treatment.

Tuberculosis Mortality in Older Age Groups, Robert J. Anderson, M. D., Public Health Reports, April 1, 1949.

---

*Issued monthly by the National Tuberculosis Association and furnished through the courtesy of The West Virginia Tuberculosis and Health Association.

The President's Page

The need for the participation of our Association membership in local, state and national activities grows greater daily as we are urged toward a socialistic state by many of the leaders in our government.

We may hesitate to assume the position that we should in our communities because in the past we have been chiefly a scientific organization.

We should, of course, continue to be chiefly a scientific organization, but it has become necessary for us also to extend our activities, individually and collectively, into the fields of business and politics. During the past fifteen years we have lived under constant threats of the socialization of our profession. We have been declared a trade, we have been required to register as lobbyists, and we are attacked daily by some of our labor leaders and by the socialists in our government.

Many freedom-loving organizations are in the fight to preserve our system of free enterprise as much as we are and they deserve our active support.

In the business world, our service clubs, our local and state chambers of commerce, our small business organizations and many others need our active membership as citizens as well as physicians. Our membership in these organizations will be of immense value to us and will help to dispel the mistaken idea that physicians as a whole are poor business men.

Politically, too few physicians have been active for the good of our organization and for the good of our local, state and national governments. We can contribute much toward better government. We have no desire to create a vast political machine, but we feel that a few key men in strategic positions can protect our rights as well as the rights of all our citizens because we know that no thinking doctor can be a socialist or a communist.

Our hobbies and special talents can lead us to contacts in many other organizations. Sports, conservation, farming, and recreational facilities come naturally along with our desire to provide a more healthful standard of living. Our members who have special talents in art and music can contribute much toward the building up of the finer things of life. We can benefit greatly from these organizations and they can benefit from our participation.

So, let us be good citizens as well as good physicians.

Thomas G. Reed.

President.

West Virginia Medical Journal

Official Journal of
The West Virginia State Medical Association
302 Atlas Building, Charleston, West Virginia

Editor

Walter E. Vest, M. D. (1951) ..... Huntington

Managing Editor

Mr. Charles Lively ..... Charleston

Associate Editors

W. M. Sheppe, M. D. (1949) ..... Wheeling
Edward J. Van Liere, M. D. (1950) ..... Morgantown
G. G. Irwin, M. D. (1952) ..... Charleston
R. H. Edwards, M. D. (1953) ..... Welch

Editor Emeritus

James R. Bloss, M. D. ..... Huntington

Business Manager

Mr. Charles Lively ..... Charleston

Published monthly on the first day of the month, at Charleston, by The West Virginia State Medical Association.

Original articles are accepted on condition that they are contributed exclusively to the Journal.

Advertising rates furnished upon request. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the American Medical Association.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston 24, West Virginia Telephone, Capitol 34-625.

RUSSELL B. BAILEY, M. D.

The death of Dr. Russell B. Bailey, coming with stunning suddenness, shocked the medical profession of West Virginia and brought expressions of genuine grief from every section of the state. Cut down at the peak of a successful surgical career, while apparently enjoying the best of health, it is hard to realize that one whose services were so badly needed has passed on.

"Russ" Bailey's success in life was due to his seemingly unlimited energy and his capacity for making quick decisions which were invariably right. His training for his career in surgery was the best that could be obtained. He was eminently successful in the practice of his specialty, and was held in the very highest esteem by his confreres.

His leadership and sound advice in organized medicine will be sorely missed by the West Virginia State Medical Association, of which he was named president elect early in August. As head of the West Virginia Cancer Society, and chairman of the state board of health, he had shown marked ability as a leader.

"Russ" Bailey was universally well liked, and his passing is mourned not only by those who knew him personally and professionally, but by all who know of his untiring efforts to serve humanity.

THE RURAL MEDICAL PROBLEM

We think that it is a fine thing that groups representing medicine, nursing, medical and hospital service plans, the public health service, medical education and the United Mine Workers Welfare Health and Retirement Fund are continuing meeting and discussions with representatives of various farm groups in an effort to find a formula for better medical care and hospital service in the rural areas of West Virginia.

No suitable plan can be designed over night, and improvement in conditions will necessarily be slow. But, it is gratifying to know that these groups are working together in the hope that something can be done to relieve a situation that is becoming increasingly critical. Meetings such as the one being held at Jackson's Mill, September 29, should result in some definite agreement concerning the course to be pursued.

The plain truth about the matter is that we need more doctors, more nurses, and additional hospital facilities. And the fact that representatives of the West Virginia University school of medicine, the state health department, and the nursing profession continue to meet on common ground with members of the medical profession and groups of farm and labor organizations representing our great rural population, lends encouragement to the thought that the creation of a four-year school of medicine and dentistry and the extension of hospital facilities into rural areas are objectives that are still very much alive in the desire of our forward looking and progressive thinking citizens to do something constructive in a matter that more or less effects all of our people.

COMMUNITY CHEST TIME

Voluntary health and welfare agencies have been pioneers in discovering human needs and the best ways of meeting them. Such services, typified by all that the Red Feather stands for, are still an essential ingredient in our American society, despite the fact that some basic services have been taken over by public welfare agencies.

As Herbert Hoover put it: "Ours is a voluntary society. You cannot retire from the voluntary field if you wish our American civilization to survive. The essence of our self-government lies in self-government outside of political government."

This is one of the principal reasons why the public should continue to support voluntary agencies such as those represented in the Community Chest. Another reason is that privately-supported and managed hospitals and educational institutions establish the standards for

similar government agencies or bureaus. Voluntary agencies serve as a spur to official progress.

Today, public welfare, providing financial assistance to the needy, the aged, and the handicapped, is a vast field. A hundred years ago public expenditures for social welfare were not even consistently recorded. However, in spite of the scope of this public welfare program, benefits are still unevenly divided, and this is where Red Feather services of the Community Chest carry the load of their responsibility for giving relief and service.

Youth and character-building are given a top place in service rendered. For example, in Community Chest drives in 168 cities last year, 30.7 per cent of Red Feather funds went to youth services—such organizations as Boy Scouts, Girl Scouts, YMCA, YWCA, neighborhood houses, and summer camps. Children's services received an average of 17 per cent.

This emphasis on youth services is typical of Red Feather services, statewide as well as nationwide. With the guidance of understanding adults, the attitudes, the ideals, and the character of thousands of young citizens of tomorrow are today being shaped.

Health services, including hospital care, clinics, visiting nurses, child guidance and care, and mental hygiene, account for another big slice of Red Feather funds. Their importance cannot be over-emphasized. For it is a well-known fact that poverty, insecurity, and slum conditions have a direct relationship to disease. Each year Red Feather agencies reach thousands of persons in a community who would otherwise remain unhelped, unassisted when major health problems arise.

Supported by Community Chest funds, health services with a strong accent on the positive and preventive aspects of all-around good health, are working side by side with public health agencies, the members of the medical and nurses professions, and with the great national voluntary agencies in the early diagnosis and treatment of the diseases that annually take such a toll of American lives.

The Community Chest, through its one annual appeal for funds, makes possible another year's service of Red Feather agencies in four basic fields of human life—the preservation of family life, the care of children, the guidance of youth, and the protection of health. Nothing is more important in the strengthening of American democracy than these purposes.

Invest in the future . . . Give now . . . and give enough for all Red Feather services.

STATE MERCHANTS ACT

The West Virginia Merchant's Association has taken positive action in the matter of pending federal legislation concerning health insurance. The board of directors, at a meeting held in Charleston early in September, voted opposition to the enactment of any plan for national compulsory health insurance. Thus, this wide-awake organization representing hundreds of merchants in West Virginia takes its place alongside hundreds of other groups in the country in the fight that is being waged against compulsory health insurance.

We congratulate the State Merchant's Association for the stand it has taken, and welcome it to the ranks of the professional, business, and lay groups which have pledged all-out opposition to the socialization of medicine in this country.

THE VETERANS SPEAK

It gives us much pleasure to note that the three great veterans' organizations, the Amvets, the American Legion, and the Veterans of Foreign Wars, have all gone on record strongly opposing Compulsory Health Insurance. Possibly most veterans feel as did one of their number who recently expressed himself: "No socialized medicine for me; I had enough of it during the war."

We have the exact wording of only one of the resolutions, but the substance of each is the same. Spoke the Legion:

> "WHEREAS, The American Legion has always had as one of its objectives to foster and perpetuate a 100% Americanism and to safeguard our liberties and freedom as opposed to any form of compulsion and regimentation; and
>
> "WHEREAS, There is now before the Congress of the United States the question of Compulsory Health Insurance which in itself is a threat to freedom:
>
> "NOW, THEREFORE, BE IT RESOLVED by the American Legion in National Convention assembled August 29-September 1, 1949, in Philadelphia, Pennsylvania, that this organization go on record as opposing any form of Compulsory Health Insurance."

Thank you, Veterans!

TIME TO BECOME MILITANT

The power that socializes medicine strangles individual freedom and snuffs the flame of life when it flickers with the least wind of uncertainty. Socialization of medicine is the last straw. When it is on the crest, life is no longer worth saving. One glorious hour of freedom is worth an age of slavery.

Now is the time to become militant in the cause of freedom. Do our lawmakers know what we think? Soon it may be too late.—J. Oklahoma St. Med. Assn.

GENERAL NEWS

TWO ASSOCIATION COMMITTEES IN IMPORTANT LATE SEPTEMBER MEETINGS

Meetings of two important committees of the West Virginia State Medical Association are being held as this issue of The Journal goes to press.

Public Relations

The state public relations committee is meeting at Jackson's Mill on September 22 with another small committee representing the various rural groups for the purpose of exploring the whole field of existing medicial care and hospital service in rural areas. Dr. N. H. Dyer, state director of health, is sitting with this group, together with a representative of hospital-medical service plans, the UMW area medical administrators, and a representative of the nursing profession.

The meeting is also being attended by Dr. Thomas G. Reed, president of The West Virginia State Medical Association, Dr. Thomas Bess, chairman of the Council, and Dr. E. J. Van Liere, dean of the West Virginia University School of Medicine.

It is hoped that some plan may be agreed upon for the extension of medical and hospital services into areas where the need for such service is critical. The matter of the development of new services and the establishment of health clinics will also be given attention.

The public relations committee is composed of Dr. Frank J. Holroyd, Princeton, chairman, and Drs. Athey R. Lutz, Parkersburg; James Klumpp, Huntington; R. D. Gill, Wheeling; and R. J. Condry, Elkins.

Hospital Relations

On September 29, the special committee on hospital relations is meeting at Charleston for the purpose of devising plans for the amicable settlement of differences which might arise between hospitals, hospital managements, and the professional staffs at the state level when such controversies cannot be settled at the local county level under the Code of Ethics of the American Medical Association. The special committee is composed of Dr. R. J. Wilkinson, Huntington, chairman, and Drs. Cecil O. Post, Clarksburg, and Robert J. Reed, Jr., Wheeling.

UROLOGY AWARD

The American Urological Association offers an annual award of $1,000.00 (first prize of $500.00, second prize $300.00, and third prize $200.00) for essays on the result of some clinical or laboratory research in urology. Competition is limited to urologists who have been in such specific practice for not more than five years and to residents in urology in recognized hospitals. Essays must be submitted to the secretary before February 20, 1950.

Full particulars concerning the award may be obtained by writing to Dr. Charles H. deT. Shivers, Secretary, Boardwalk National Arcade Building, Atlantic City, N. J.

THOMAS A. HENDRICKS SCHEDULED FOR TWO ADDRESSES IN STATE

Mr. Thomas A. Hendricks, of Chicago, secretary of the Council on Medical Service of the American Medical Association, will be the guest speaker at a joint luncheon of the Woman's Auxiliary to Kanawha Medical Society and the executive board of the Woman's Auxiliary to the West Virginia State Medical Association, Tuesday, October 11, at Charleston. The luncheon will be held in the ballroom at the Ruffner hotel at 12:45 o'clock. Mrs. W. A. Thornhill, Jr., of Charleston, president of the Kanawha Auxiliary, will preside as chairman.

The occasion will mark the official visit to Kanawha Auxiliary of Mrs. Dana T. Moore, president of the State Auxiliary. She will also speak at the luncheon.

The wives of all of the interns and residents at hospitals in the Charleston area will be guests at the luncheon, and members of the Kanawha Auxiliary will also be permitted to bring guests. The members of the advisory board to the Auxiliary will also be guests at the luncheon.

Members of other auxiliaries are invited to attend the luncheon, and reservations may be made by addressing Mrs. A. B. Curry Ellison, 3900 Venable Avenue, S. E., Charleston.

The executive board of the State Auxiliary will meet at 9:30 o'clock on the morning of the luncheon in the Rose Room at the Ruffner hotel, with Mrs. Dana T. Moore, the president, presiding.

Following the meeting at Charleston, Mr. Hendricks will go to Parkersburg where he will be the guest speaker that evening at an open meeting in the Chancellor hotel ballroom, sponsored by the department of applied education of the Parkersburg Woman's Club. His subject will be, "The Evils of Compulsory Health Insurance."

Tom Hendricks is no stranger to West Virginia audiences. His last appearance in this state was on January 9, when he was guest speaker at the luncheon held in connection with the Secretaries' Conference at Charleston.

ASSISTANT PROFESSOR OF PSYCHIATRY NAMED

Dr. Charles A. Zeller, superintendent of Weston State Hospital, has been named as part-time assistant professor of psychiatry at West Virginia University School of Medicine, Morgantown. The appointment was made by Dr. Irvin Stewart, president of the University.

ORTHOPEDIC SURGEONS ELECT

Dr. Randolph L. Anderson, of Charleston, has been elected chairman of the section on orthopedic surgery of the West Virginia State Medical Association, and Dr. Dean L. Hosmer, of Bluefield, secretary-treasurer. The new section was created by the Association's House of Delegates at the annual meeting at White Sulphur Springs, August 4-6, 1949.

MLB LICENSES FORTY DOCTORS TO PRACTICE IN WEST VIRGINIA

At the first meeting of the new Medical Licensing Board, held July 7-9, 1949, at Charleston, forty doctors were licensed to practice medicine in this state, ten by reciprocity with other states, and thirty by direct examination.

The following is a list of doctors licensed by direct examination:

Brown, Richard William, Princeton
Burdette, Marvin Garten, Charleston
Burley, Lee, Sistersville
Claro, Joseph John, Charleston
Daniel, Doff D., Jr., Beckley
Ehrgott, William August, Fairmont
Gordon, Paul Edwin, Clarksburg
Greco, Robert, Morgantown
Haswell, Ralph Woodworth, Man
Hibbard, Robert William, Huntington
Hiscoe, Demerritte Bonta, Coal Mountain
Hudnall, Leonard Preston, Pratt
Jackson, John Edward, Sr., Charleston
Kenney, Eugene William, Huntington
Kincaid, William Eugene, Parkersburg
Konieczny, Leo Stanley, Mason City
Lawson, Robert Clyde, Williamson
Maguire, Henry Francis, Huntington
McReynolds, Charles Reese, Man
Moore, Michael Judson, Beckley
Nave, Dick Donnelly, Weston
Niermann, William Albert, Baltimore, Md.
Richard, Robert Earl, Morgantown
Ried, Hubert Leo, Gary
Stallard, Clinton Wolfe, Jr., Montgomery
Stump, Michael Mayfield, Philippi
Swansbro, William, Jr., Wheeling
Thompson, Carl Winston, Hamlin
Walker, William Nelson, Jr., Pittsburgh, Pa.
Zeller, Charles Adam, Weston

The following doctors were licensed by reciprocity:

Edwards, Roy Alvin, Jr., Huntington
Kerr, Lorin Edgar, Morgantown
Lee, Parker Hall, Jr., Bluefield
Mathias, James Dolan, Wardensville
McCauley, Ralph Taylor, Roderfield
Miller, Irvin S., Welch
Picard, Robert Shelly, Shreveport, La.
Rizzo, Russell Paul, Morgantown
Stucky, William Frederick, Jr., Winona
White, Marion Lawrence, Jr., Huntington

The next meeting of the Medical Licensing Board for the purpose of examining applicants for licensure in West Virginia will be held at Charleston, October 3-5, 1949.

WILL SEEK SHORT FORM INSURANCE REPORT

A special committee has been named by Dr. Thomas Bess, chairman of the Council of the West Virginia State Medical Association, for the purpose of making a study of examination forms required by insurance companies doing business in West Virginia.

The committee has been asked to prepare a model short from of report to be submitted to the insurance commissioner with a view to having it adopted as a standard report for this state by life insurance companies licensed to operate in West Virginia.

Dr. Fred Richmond, of Beckley, has been named chairman of the committee, and the other members are Drs. D. C. Ashton, of that city, and Hugh C. Bailey, of Charleston.

WAITING PERIOD FOR PATIENTS LENGTHENS AT TB SANATORIA

The waiting period for admittance of patients to the three tuberculosis sanatoria in West Virginia is becoming increasingly longer. According to the state department of health, over one hundred diagnosed cases of tuberculosis were on the waiting list on June 1, 1949.

The situation is due to several factors, including the closing last January of a 150-bed unit at Hopemont because of fire hazard, and an accelerated case-finding program instituted by the state department of health.

Male patients cannot be accepted at Pinecrest for five weeks or more after application is filed. Female patients may expect to be received within three to four weeks.

The situation is reversed at Hopemont, where female patients cannot be accepted for from two to three months.

At Denmar, with a limited bed capacity, a patient, either male or female, must wait approximately three months before acceptance.

There has been a definite decrease in the turnover of new patients at all of the sanatoria. Only fifty per cent of the patients admitted to Pinecrest now leave of their own volition, as compared with seventy per cent during the war years. This is partially attributable to a social service program instituted a year ago by the state department of health and the board of control. In addition, local tuberculosis associations and various civic groups have been "adopting" patients, to whom members write letters, send packages, and visit from time to time.

The average patient turnover in tuberculosis is slow, as the recommended minimum stay is approximately one year, while many remain as long as five or ten years.

With the aid of federal and state funds, the state board of control has an extensive expansion program for state institutions under way, which includes two of the tuberculosis sanatoria. A 22-bed wing will be built at Hopemont, and a new 100-bed wing and a central heating plant at Denmar.

Tuberculosis is still among the ten leading causes of death in West Virginia, being in ninth place in 1948, with 623 deaths reported to the state department of health. However, deaths from this disease have decreased steadily over the past few years. In 1930 deaths from tuberculosis totaled 1134, and in 1940, 865.

NEW SECRETARY FOR R. N. BOARD

Miss Nellie I. Roop, who has served as executive secretary of the West Virginia Board of Examiners for Registered Nurses since 1946, has resigned to accept a position as nursing arts instructor at Watts Hospital, in Durham, North Carolina. She is succeeded by Miss Marjorie Du Mez, of Oneonta, New York, instructor at Hartwick College School of Nursing. Miss Du Mez assumes her new duties the middle of September.

COMMITTEE SEEKS AID OF DOCTORS IN STUDY OF STATE VA PROGRAM

The special committee named by the Council at the pre-convention meeting at White Sulphur Springs, August 3, for the purpose of making a study of Veterans Administration matters in this state, is undertaking to make a statewide survey for the purpose of obtaining information concerning medical care of veterans at the county level. The committee is composed of Dr. James S. Klumpp, of Huntington, chairman; Dr. J. C. Huffman, Buckhannon; and, Dr. John C. Condry, Charleston.

The committee is asking that every member of the State Medical Association who is a participating physician in the veterans care program write to the chairman concerning the progress of the VA medical care program in his particular community. The committee is interested in receiving these reports so that sufficient data may be gathered to provide material for a full report to the Council.

If the service is satisfactory, the committee is just as much interested in being so notified as it is in having grievances aired. Members are urged to comment fully upon the Veterans Administration program, whether the doctors reside in small communities or in large cities.

Doctor Klumpp, the chairman, has stated that it is only through the expressions of the members of the medical profession that any correct evaluation of the medical care program in this state can be made.

In the report to the Council, names of individual doctors will not be used, and only an overall report of conditions as they exist in West Virginia at the present time will be made. According to Doctor Klumpp, it is the desire of each member of the committee to make a complete study and thus be able to submit an unbiased report to the Council.

HOME ACCIDENTS TAKE HEAVY TOLL

Accidents claimed 1722 lives in West Virginia in 1948, and 31.5 per cent of the total were sustained in homes. This is the highest rate on record for a specific environ.

Falls in homes accounted for 46.3 per cent of the deaths in this catagory. Of this number, the largest toll, 85.7 per cent, involved persons sixty-five years of age and over.

In addition to deaths from falls, other causes of accidental deaths in the home were conflagration and burns, 110; poisoning by liquids and solids, 24; firearms, 30; gas, 14; and miscellaneous, 67.

Of the total of 36 home deaths from suffocation last year, 35 were children under one year of age.

Automobile accidents accounted for 25.9 per cent of the total accidental deaths, deaths from accidents in industrial plants, 21.1 per cent, and farm accidents, 2.2 per cent.

According to information compiled by Dr. N. H. Dyer, state director of health, males are more prone to all forms of accidents than females, with 1291 male deaths from this cause in 1948 as compared to 421 female deaths.

STATISTICAL REPORT

West Virginia families are apparently growing larger. First-born offspring represent a smaller portion of the 1949 births reported to the State Health Department, while second, third, and fourth-born babies are on the increase.

First births in West Virginia in July, 1947, totaled 4866. This total was but 4609 in 1948, and 4610 in 1949.

First births in July, 1947, were 39.8 per cent of the total, and but 32.9 in 1949, but second births accounted for 21.6 per cent for that period in 1947 and 24.7 in 1949.

For this period, the percentage for third births rose from 13.4 in 1947 to 15.1 in 1949, and for fourth births, from 6.9 in 1947 to 8.2 in 1949. The percentage of fifth births and over rose from 18.3 in 1947 to 19.1 in 1949.

Maternal deaths have shown a decrease for the first seven months of 1949, the total number reported being 23, as compared to 40 for the same period last year.

The infant death rate for the first seven months is more favorable than that of any preceding year, the rate of 38.3 per one thousand live births being eight per cent lower than the corresponding period last year.

The 1949 deaths from poliomyelitis and Rocky Mountain spotted fever have doubled the 1948 figures. There have been four deaths from poliomyelitis so far this year, and two from Rocky Mountain spotted fever.

Dysentery also showed an increase, with six deaths during July, as compared to a total of only four for the first seven months of 1948.

On the favorable side, important decreases have been noted for whooping cough, (25 per cent), diphtheria (75 per cent), syphilis (20 per cent), and measles (22 per cent).

RELOCATIONS

Dr. Thomas B. Dunne, of Charles Town, has moved to Oakland, Maryland, where he has accepted appointment as deputy state and county health officer for Garrett County.

* * * *

Dr. John Hercles Gile, who has served as a resident at the Charleston General Hospital for the past two years, has located at Parkersburg for the practice of his specialty of internal medicine. He has offices at 1212 Market St.

* * * *

Dr. David E. Yoho, of Delbarton, has moved to Moundsville, where he will continue in general practice. He has offices at 605 Jefferson Avenue.

* * * *

Dr. Hal Waugh Smith, of Montgomery, who has just completed a two-year residency at the New York Eye and Ear Infirmary, has moved to San Francisco, where he will engage in the practice of his specialty of EENT in association with Dr. Frank Hand. They have offices at 450 Sutter Street, in that city.

* * * *

Dr. Milton Katz, of Huntington, has accepted appointment in the department of chemistry research institute, Michael Reese Hospital, Chicago, where for the next year he will be engaged in clinical and laboratory research work.

POPULATION ESTIMATED AT OVER 2,000,000

A revised estimate of West Virginia population made by the division of vital statistics of the state health department shows an increase of 191,026 for July, 1949, over the population of 1,901,974 reported by the United States Bureau of the Census as of April 1, 1940. The division's estimate of the population as of July 1 is 2,093.000.

Factors influencing the division's estimate of population include the increasing number of births and higher birth rate, with the death rate remaining relatively the same; the fact that the population of the United States, as estimated by the Bureau of the Census, is 149,000,000 as of July 1, 1949, an increase of over thirteen per cent since 1940, compared to the Bureau's estimate of less than one per cent increase for West Virginia during the same period; the increasing number of small businesses; and, the increasing school enrollment each year.

During the past nine years, the birth rate in West Virginia has averaged 15 per cent higher than the birth rate for the United States as a whole. During the same period, the death rate has averaged 10 per cent lower.

The estimate of population, by counties, shows increases as follows: Kanawha, 68,916; Cabell, 9,244; Raleigh, 8,717; Monongalia, 7,857; Logan, 6,896; Marion, 6,396; Fayette, 5,028; and Wood, 5,006.

HEALTH DEPARTMENT RESIGNATIONS

Mr. Earl L. Geiger, chief of the tabulating unit of the division of vital statistics, state department of health, Charleston, has been named by the State Board of health as acting director of the division. He succeeds Mr. Hi Eastland Steele, who resigned effective September 30, 1949, to accept a position as a national consultant in vital statistics with the USPHS, in Washington, D. C.

Mr. Steele has been director of the division since 1945, coming to the state department of health from the Bureau of the Census.

Dr. Murry Stuart Lauder, clinician in tuberculosis with the bureau of tuberculosis control of the state department of health since May, 1947, has resigned, effective September 15, 1949.

UROLOGICAL CONTINUATION COURSE

A continuation course for physicians on "Medical and Surgical Disorders of the Urinary Tract" will be offered November 17-19, 1949, by the Frank E. Bunts Institute and the Cleveland Clinic.

Dr. Herman L. Kretscher, of Chicago, will be the speaker at the evening meeting on November 17. His subject will be, "Clinical Significance of Hematuria." The other out-of-town speaker will be Dr. Louis Leiter, of New York City, who will speak Saturday morning, November 19, on "Uremia," and who will take part in the panel discussion closing the course.

Inquiries regarding the complete program and registration should be addressed to the Director of Education, Frank E. Bunts Educational Institute, 2020 E. 93rd St., Cleveland 6, Ohio.

PERSONNEL OF LIAISON COMMITTEE COMPLETED

Dr. Frank J. Holroyd, of Princeton, has been named by Dr. Thomas G. Reed, president of the State Medical Association, as the third member of a liaison committee between the Association and the Board of Governors of West Virginia University.

The other two members of the committee were named in a resolution adopted unanimously by the House of Delegates at the annual meeting at White Sulphur Springs, August 5. They are Dr. D. A. MacGregor, of Wheeling, and Dr. Frank V. Langfitt, of Clarksburg, who will serve as chairman and co-chairman, respectively.

One of the prime objects of the committee is to bring about closer relations and a better understanding of the needs of the medical profession between the Association and the Board of Governors, especially in the field of medical education.

AAPS TO MEET IN DETROIT

The 6th Annual Meeting of the Association of American Physicians and Surgeons will be held October 28-29, 1949, at the Book-Cadillac Hotel, in Detroit.

Guest speakers include Herbert R. O'Connor, United States Senator from Maryland; Dr. R. B. Robins, Democratic National Committeeman from Arkansas; and Dr. James L. Doenges, of Anderson, Indiana.

Requests for hotel reservations should be made through the A.A.P.S. Headquarters, 360 North Michigan Avenue, Chicago. The registration fee of $7.50 will include the charge for the annual banquet. No registration fee will be assessed against wives of doctors, and tickets for them may be purchased for $5.00 per person.

TELEVISED OB. AND GYN. PROCEDURES

A televised close-up of obstetrical and gynecological procedures will be presented for the first time in a week-long graduate teaching program at the Lewis Memorial Maternity Hospital, in Chicago, October 24-29, 1949. The program will be under the direction of Dr. Herbert E. Schmitz, professor and chairman of the Department of Obstetrics and Gynecology of the Stritch School of Medicine of Loyola University, Chicago, assisted by several visiting professors of obstetrics and gynecology from other medical schools.

The program will be open to members of the medical profession without charge, and facilities will be available to permit attendance of 150 doctors.

This television presentation of an important teaching program is made possible through the cooperation of Ciba Pharmaceutical Products, Inc., and the Radio Corporation of America.

SOUTHERN MEDICAL AT CINCINNATI

The annual meeting of the Southern Medical Association will be held at the Netherland Plaza in Cincinnati, Monday through Thursday, November 14-17, 1949, with the Campbell-Kenton County (Kentucky) Medical Society as the host society.

THE WEST VIRGINIA MEDICAL JOURNAL

302 ATLAS BUILDING. CHARLESTON. W. VA.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Editor
WALTER E. VEST, M. D.
955 Fourth Ave.
Huntington, W. Va.

Managing Editor and
Business Manager
MR. CHARLES LIVELY
Box 1031
Charleston 24, W. Va.

Associate Editors:
EDWARD J. VAN LIERE, M. D.
Morgantown, W. Va.
W. M. SHEPPE, M. D.
Wheeling, W. Va.
G. G. IRWIN, M. D.
Charleston, W. Va.
R. H. EDWARDS, M. D.
Welch, W. Va.

JAMES R. BLOSS, M. D., Editor Emeritus, Huntington

Vol. XLV NOVEMBER, 1949 No. 11

EMPHYSEMA IN ANTHRACOSILICOSIS[1, 2]

By BURGESS GORDON, M. D.,
Philadelphia, Pa.

Pulmonary emphysema in anthracosilicosis usually develops as a compensatory mechanism and later becomes a complicating disturbance of the pulmonary fibrosis. It occurs in the form of localized, lobular or widespread dilatations of the lungs, usually in the midst of fibrotic processes and conglomerate nodulation. The terms hypertrophic, focal, compensatory and senile designate the types of emphysema. Hypertrophic emphysema is the most characteristic and prominent type, the other forms being present coincidentally in varying degrees of development.

The causes of emphysema include malposition of thoracic structures, bronchitis, superimposed infection, bouts of severe paroxysmal cough, allergy and the degenerative processes of aging tissue related to vascular sclerosis. In addition, disease of the intervertebral disks with hyperplasia, premature ossification of the costal cartilages, postural defects of the thorax causing displacement of the lungs, and obesity which favors the downward displacement of the diaphragm may be considered as direct or indirect causes. Thus, while the influences of anthracosilicosis are predominant, the various contributing factors are important for consideration.

The pathology of anthracosilicosis is basically fibrosis, with nodulation and emphysema. A feature is the extreme variation in the proportions and extent of the fundamental processes. While the prominent findings indicate fibrosis in the majority of cases, with others the emphysema is the most predominant. In the gross pathology there is distention of the lungs, especially in the apices and sternal margins, with loss of elasticity, pallor and deposition of pigment. A feathery consistency is noted on palpation. With the senile type the lungs are distended, but small and sometimes lengthened. In microscopic sections the alveoli are dilated, ruptured, or fused with other air sacs. Blebs are found in the periphery of the lungs. The pathology of advanced anthracosilicosis varies in prominence, depending somewhat on the degree of fibrosis. In some instances, the emphysema is more extensive than the associated fibrous replacement of pulmonary tissue. Hypertrophy of the left ventricle, dilatation of the right side of the heart and *cor pulmonale* may be present. Pulmonary arteriosclerosis is not a feature of the hypertrophic emphysema developing from obstructive causes, but it may be present in certain cases with no definite etiology.

GENERAL CONSIDERATION OF EMPHYSEMA

The characteristic mechanism of breathing is contraction of the chest and lowering of the diaphragm in full inspiration. The excursions of the lungs are both horizontal and vertical. While inspiration is due essentially to active muscular effort, expiration is passive and depends on the recoil of the lungs and the elasticity of the chest

[1]From the Bartan Memarial and White Haven Divisians, Jeffersan Hasptal, and the Department af Medicine, Jeffersan Medical Callege, Philadelphia, Pa.

[2]Presented befare a meeting af the West Virginia Chapter af the American Callege af Chest Physicians at Charlestan, May 17, 1949.

wall. In strenuous exercise there is a modification of the respiratory movements. The diaphragm rises only partially, the lungs remaining somewhat distended. In a sense, expiration is accomplished imperfectly, and each succeeding inspiration begins before expiration is completed. With a demand for more air there is an increase of inspiratory effort which, however, remains uncompensated since there is no corresponding degree of expiration. Accordingly, the expiratory muscles are brought into play, but their effectiveness is transient because of fatigue and the difficulty of coordination, with the result that inspiration remains essentially compensatory. While the normal lungs assume their former positions, movements and functions following exercise, the abnormal lungs tend to remain stretched, even after a prolonged rest. The combined effects of increased inspiratory and expiratory pressure are definitely contributory in the development of emphysema.[1]

The state of overdistension of the bronchi and alveoli is an important cause of atrophy of the alveolar walls and their permanent dilatation. The phenomenon often occurs in long-continued cases of asthma and chronic bronchitis, the resulting mechanism being related to partial and transient obstruction of the bronchi with retention of secretions and swelling of the mucous membrane. With varying degrees of obstruction, especially in localized areas, there eventually will be the development of widespread alterations of the alveoli. Bronchial spasm may be closely associated with the blockage of bronchi which is especially evident during attacks of bronchitis. Additional contributing factors involved in the attacks of acute infections relate to cough and forceful respiration. These are traumatizing to the diseased respiratory tissue, aggravate bronchial spasm, and subsequently favor permanent dilatation of the alveoli.

The association of the heart and emphysema concerns the degree of oxygen saturation of the blood, alterations of venous pressure, the behavior of the diaphragm and the influence of infections. It has been suggested that when the heart fails as a result of emphysema, the cardiac insufficiency is not necessarily related to increased pressure in the lesser circulation, but rather to the impaired coronary circulation and the superimposed effects of anoxemia upon the myocardium. Emphysematous patients may experience dyspnea, cyanosis and edema of the dependent parts, characteristic features of myocardial insufficiency; and these manifestations may be related to increased oxygen unsaturation of the blood caused by impairment in pulmonary ventilation. It is not uncommon in emphysema for myocardial insufficiency to develop during attacks of bronchitis and bouts of asthma, and for the heart to return to normal as the pulmonary condition improves. The influence of peripheral venous pressure has been stressed, since it is known in emphysema that somtimes there is a considerable rise of venous pressure. With distention of the lungs the negative pleural pressure is decreased and there is a more or less corresponding increase of venous pressure. In cases with a low position of the diaphragm there apparently is retardation of the free flow of blood at the aperture through which the inferior vena cava passes. This results possibly in a decreased volume output of the heart.

SYMPTOMS

The symptoms of emphysema in anthracosilicosis may be gradual in onset and largely overlooked until the occurrence of an acute cold, or they may be noted following active exercise. Puffiness and mild shortness of breath on exertion are the early manifestations. Moderate to marked cyanosis, asthmatic-like attacks of dysnea, bouts of acute bronchitis and cough become evident in progressive disease. In advanced cases the dyspnea is precipitated by the slightest exertion, and orthopnea develops with edema of the extremities. In comparison with the dyspnea of heart disease the difficulty in breathing usually is not accentuated on lying down flat in bed. With heart disease, shortness of breath becomes marked and relief is obtained only on sitting up. Dyspnea in the emphysema of anthracosilicosis may be greatly relieved by bronchial drainage following broncho-dilatation, especially during attacks of pneumonitis and bronchospasm.

PHYSICAL SIGNS

The characteristic features of emphysema include an increase of the anteroposterior diameters of the chest, with upper dorsal kyphosis, the position of the chest appearing in permanent inspiration. With marked cases the chest is barrel-shaped, the shoulders elevated, the neck shortened, and the intercostal spaces widened. The sternum may be prominent, with marked accentuation of the intercostal cartilages. In some instances the ribs in front are almost completely horizontal. With inspiration there is elevation of the chest with no appreciable degree of expansion. The apex beat cannot be observed.

The percussion note is hyperresonant, while the breath sounds are distant and greatly prolonged during expiration. The rales vary with the degree of associated bronchitis, and may be "dry," "musical," or moderately coarse in type. Diaphragmatic excursions are limited to the lower levels of the inspiratory range; in some instances the fluoroscopic examination reveals only the slightest degree of diaphragmatic excursions.

In the examination of the heart in emphysema associated with anthracosilicosis the findings depend essentially on the condition of the valves and myocardium. With the diseased heart there are evidences of endocardial and myocardial involvement. In the normal heart there are no significant alterations until progressive disease causes right-sided heart strain, as noted in the electrocardiograms.

While the physical signs of emphysema are characteristic in the majority of cases, exceptions are striking and should be noted. In some instances the thoracic spine is straighter than normal, the ribs and the entire thorax elevated, while the anteroposterior diameters are not markedly increased. In other cases, with a long-type of chest, the anterior part of the thorax may appear flattened. The breathing tends to be abdominal and with fluoroscopic examination the diaphragm moves normally, although at lower respiratory levels. In the senile type the ribs are elevated and the thoracic spine straighter than normal. With another group there is a definite influence of obesity, as described by Kerr and Langen[2]. In these cases the dorsal spine is shifted backward with exaggeration of the thoracic curve, the dorsal and lumbar spines affecting the shape of the letter S. While dyspnea is often marked, evidence of the characteristic barrel-shaped chest is minimal or absent.

The characteristic x-ray findings of emphysema include a lowered and flattened diaphragm, with increased illumination of the lung fields. The latter phenomenon may be noted especially in the bases of the lungs, less frequently in the apices and near the areas of massive conglomeration. Differences in density of the two lung fields may be found; with increased illumination on one side the possibility of obstructive emphysema is suggested. While the x-rays are invaluable in diagnosis, they are sometimes misleading in the evaluation of impaired pulmonary function, as for example, the degree of apparent emphysema may be disproportionate to the clinical manifestations and estimations of pulmonary function and *vice versa.*

PHYSIOLOGIC STUDIES

The maximal breathing capacity, vital capacity, minute ventilation, breathing reserve and the x-rays are used for determining the presence of emphysema, as suggested by Cournand and Richards.[3]

The maximal breathing capacity is related to movement of the diaphragm, the intercostals and other accessory muscles of respiration, the patency of the tracheobronchial pulmonary airway, the elastic property of lung tissue and neuromuscular coordination. Hyperventilation occurs in practically all persons affected with emphysema, but there is no significant correlation between the extent of hyperventilation and the degree of emphysema. Hyperventilation is a compensatory mechanism, however, and during the early stage of emphysema it may be adequate until loss of elasticity of the lungs and obstruction of the alveoli and smaller bronchi markedly decrease the maximal breathing capacity and vital capacity. The minute ventilation alone is not related to the extent of pulmonary disability. The studies indicate that maximal breathing capacity is a valuable test of function[4]. With a maximal breathing capacity of less than 40 liters per minute, the emphysema is a factor in breathing impairment.

It has been well established that vital capacity as a single measurement of the ability to move air from the lungs in one forceful expiration is of limited value for determining the extent of the emphysema. It is less reliable as an index of pulmonary function impairment than maximal breathing capacity[5]. The vital capacity determinations are of greatest value in the calculation of total capacity. The decrease in vital capacity below the predicted value is consistently less than the reduction in maximal breathing capacity.

The studies concerned with the different types of impairment of pulmonary function include the transfer of O_2 and CO_2 between the alveoli and arterial blood. This determination indicates the interference of fibrosis with the uniform aeration of the alveoli. In the basic mechanism the affected alveoli are poorly ventilated, with a resulting increase in the mean pressure gradient of pO_2 between the alveoli and the arterial blood[5].

Distribution is one of the factors contributing to the alveolar-arterial pO_2 gradient. This is defined as: (1) the variation in alveolar pO_2 in different parts of the lungs and (2) the ratio of alveolar ventilation to alveolar perfusion. In certain instances the blood supply to alveoli is

obliterated due to fibrosis permitting ventilation but not perfusion, thus increasing a physiologic dead space and reducing the efficiency of O_2 removal per liter of ventilation. Studies with high and low levels of oxygenation indicate that the increased pO_2 gradient between the alveoli and arterial blood is primarily one of distribution and not a diffusion difficulty (increased resistance to passage of oxygen through the pulmonary membrane). It may be observed that the pulmonary function impairment of distribution produces marked arterial oxygen unsaturation at rest, even in the absence of marked emphysema and with a normal maximal breathing capacity.

The compensatory mechanism for the mixing and dilution impairment resulting from the increased volume of residual air is hyperventilation. The extent of this response varies widely, so that compensation is effective in some patients and faulty in others with the same degree of emphysema. The dyspnea level varies widely, a fact which explains the observation that the severity of respiratory symptoms is not an accurate measure of the relationship between the residual air and the total lung volume[5].

TREATMENT

The symptomatic treatment of pulmonary emphysema follows the same general plan as in anthracosilicosis[6, 7,8]. Intermittent positive pressure breathing with oxygen and bronchodilator drugs is of definite symptomatic value in a high percentage of cases. The chief value of pressure breathing is in providing a form of respiratory exercise; the bronchodilator drugs facilitate the movement of trapped air from the bronchioles and dilated alveoli. Diaphragmatic elevation, as obtained by the use of a special abdominal support, is effective in obesity and in cases with low positions of the diaphragm. Elevating the diaphragm places the lower areas of the lungs in the expiratory position, favoring expectoration and the passage of residual air. Although rest is indicated in elderly persons with respiratory distress, undue physical inactivity may become harmful, especially for those who possess some degree of available pulmonary function. Exercise is valuable for maintaining the general health and should not be discontinued entirely. It favors the resolution of intercurrent infection and is a valuable accessory factor in the circulation. Increased discomfort, with accelerated respiration and increased pulse rates, calls for limitation of activities; stair climbing and walking rapidly, especially against the wind, should be avoided.

The value of drugs in emphysema is disappointing. The expectorant and sedative drugs commonly used are more disturbing than effectual. Codeine favors the retention of secretions and should be used cautiously for severe racking cough. In failure of the circulation due to primary myocardial disease there may be some value in the use of digitalis and theobromine derivatives, but there is no definite effect in *cor pulmonale*. Mercuhydrin 2 cc. given intramuscularly once weekly is sometimes useful in controlling edema. It is essential to maintain an adequate intake of protein.

CONCLUSIONS

1. The clinical features of predominant emphysema in anthracosilicosis are discussed.

2. Certain basic features pertaining to the physiologic disturbances of emphysema associated with anthracosilicosis are reviewed.

3. The general management of emphysema is described.

REFERENCES

1. Hamman, Louis: Emphysema, Oxford Medicine, Christian, H. A., Editor, Oxford University Press, New York, Vol. II, Part I, 68.
2. Kerr, W. J., & Langen, J. B.: The Postural Syndrome Related to Obesity Leading to Postural Emphysema and Cardiorespiratory Failure. Ann. Int. Med., 1936, 10:569.
3. Cournand, A., & Richards, D. W., Jr.: Pulmonary Insufficiency: I. Discussion of a Physiological Classification and Presentation of Clinical Tests. Am. Rev. Tuberc., 1941. 44:22.
4. Darling, R. C., Cournand, A., & Richards, D. W., Jr.: Studies on Intrapulmonary Mixture of Gases; An Open Circuit for Measuring Residual Air, J. Clin. Invest., 1940, 19:609.
5. Motley, H. L., Lang, L. P., & Gordon, B.: Pulmonary Emphysema and Ventilation Measurements in 100 Cases of Anthracosilicosis. Am. Rev. Tuberc., 1949, 59:270.
6. Motley, H. L., Werko, Lars, Cournand, Andre, & Richards, D. W., Jr.: Observations on the Clinical Use of Intermittent Positive Pressure. J. Aviation Med., 1947, 18:417.
7. Motley, H. L., Lang, L. P., & Gordon, B.: Total Lung Volume and Maximal Emphysema After Repeated Periods of Intermittent Positive Pressure Breathing. J. Aviation Med., 1948, 19:609.
8. Gordon, B.: Results of Abdominal Compression in Pulmonary Tuberculosis. Am. Rev. Tuberc., 1935, 35:1.

UNRECOGNIZED DIABETES

Two physicians of the USPHS, making a study of the population of a New England town, report that diabetes is more prevalent than commonly supposed, with a large number of unrecognized cases of the disease in every community. In the town studied, three hitherto undiscovered and unsuspected cases were found for every four previously known cases.—R. N.

ELECTROCARDIOGRAPHIC STUDIES IN ANTHRACOSILICOSIS[1, 2, 3]

By LEONARD P. LANG, M. D.,
Philadelphia, Pa.

This presentation is concerned with the correlation of electrocardiographic findings and physiologic studies of pulmonary function in a group of individuals exposed to silica-containing dust while engaged in mining coal. From a pathologic standpoint the accumulation of silica particles in the perivascular lymphatics with the resultant fibrosis increases the resistance in the lesser circulation and leads to pulmonary hypertension. Long standing pulmonary hypertension might reasonably be expected to cause hypertrophy and dilitation of the right ventricle with eventual decompensation. Post mortem studies have shown that many individuals with anthracosilicosis have enlargement of the right side of the heart, and that congestive failure is a frequent cause of death. Charr and Savacool[1], in post mortem examinations in 66 cases of anthracosilicosis, found myocardial changes in all cases with varying degrees of dilitation and hypertrophy of the right side of the heart. Coggin[2] observed the presence of right ventricular hypertrophy in 44 per cent of 102 cases of anthracosilicosis, and Parker[3] showed that these same changes were present in 75 per cent of 32 cases of emphysema. The determination of isolated right ventricular hypertrophy during life may be extremely difficult unless the degree of enlargement is great, or signs of frank heart failure are present. Since the right ventricle is situated on the anterior aspect of the heart, x-ray examination and fluoroscopy frequently fail to reveal any abnormalities. During the earlier stages of right ventricular hypertrophy, without failure, electrocardiographic findings are present which reflect the underlying changes of right ventricular enlargement[4].

METHODS AND MATERIAL

The material upon which this study is based consists of electrocardiographic observations in a group of 148 coal miners on whom physiologic tests of pulmonary function were performed. The ages of the patients ranged from twenty-nine to seventy-two years, with a mean of fifty-three years. These individauls were exposed to varying concentrations of dust for periods ranging from three and one-half to forty-four years with an average of 28.6 years exposure. Pulmonary function studies performed were described in a previous publication[5]. The residual air was determined by the oxygen open circuit method, and when expressed as a percentage of the total lung volume gave a quantitative measurement of pulmonary emphysema. The partial pressure of oxygen in arterial blood (pO_2) expressed in millimeters of mercury was done by the method of Riley *et al*[6]. Maximal breathing capacity was performed with a modified Benedict-Roth metabolism apparatus[5]. Inspiratory and expiratory x-ray films were done routinely. Electrocardiographic studies consisted of three standard limb leads plus at least three precordial leads, usually CF_2, CF_4 and CF_5. The criteria for the diagnosis of right heart strain as described by Katz[7] were used in this study as evidence of right ventricular hypertrophy. The important diasgnostic points are as follows:

1. A QRS complex which is inverted or mainly inverted in lead I, with QRS in lead II small and upright or with a deep S wave.
2. S-T segment in lead III depressed with S-T segment bowed upward and T inverted and asymmetric.
3. Lead CF_2 may show same pattern as in Lead III.
4. A decrease in the R/S ratio in the chest leads as the precordial electrode is moved from right to left.
5. Presence of the "P" pulmonale pattern (tall peaked P waves in leads II and III with inverted P waves in the chest leads).

Not all of these changes were required to be present in any individual tracing, the most important being the changes in the S-T segments and the presence of a persistent deep S wave in the left precordial leads (figures 1 and 2).

Table 1

RIGHT HEART STRAIN IN RELATIONSHIP TO X-RAY STAGE OF SILICOSIS

Stage of Silicosis	*Number of Cases*	*Right Heart Strain*	*Percentage*
Normal or Borderline	14	3	21
1st Stage	25	8	32
2nd Stage	29	2	7
3rd Stage	80	23	29
Total	148	36	24

RESULTS

Electrocardiographic evidence of right heart strain was present in thirty-six (24 per cent) of the 148 cases studied. There was no apparent relationship between the degree of pulmonary fibrosis as judged by the x-ray and the electrocardiographic findings (table 1). Three of the fourteen individuals (21 per cent) whose x-rays were classified as borderline presented electro-

[1]From the Cardio-Respiratory Laboratory, Barton Memorial Division of Jefferson Medical College Hospital and the Department of Medicine of Jefferson Medical College.

[2]Investigation aided by Research grant of the Anthracite Health and Welfare Fund of Jefferson Medical College Hospital.

[3]Presented before a meeting of the West Virginia Chapter of American College of Chest Physicians at Charleston, May 17, 1949.

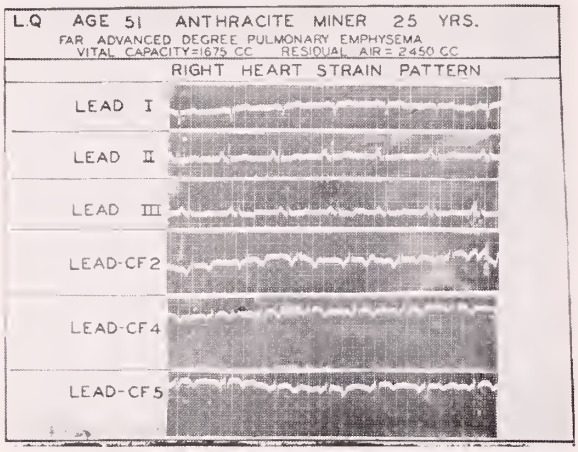
cardiographic evidences of right heart strain. Of the group with first stage changes on x-ray eight of twenty-five (32 per cent) had right heart strain. In the second stage group only two of twenty-nine (7 per cent) had the typical electrocardiographic changes. There is no obvious explanation for the small percentage of individuals with right heart strain in this group. Eighty patients were classified as having third stage anthracosilicosis and of this number thirty-six (29 per cent) were found to have evidence of right heart strain. It will be noted that the percentage of individuals with borderline or first stage changes exhibiting right heart strain was approximately the same as in the group with third stage anthracosilicosis.

Table 2

RIGHT HEART STRAIN IN RELATIONSHIP TO DEGREE OF EMPHYSEMA

Degree of Emphysema	*Number of Cases*	*Right Heart Strain*	*Percentage*
None	16	0	0
Slight	29	0	0
Moderate	45	6	13
Advanced	25	11	44
Far Advanced	33	19	58

When the presence of right heart strain was compared with the degree of emphysema present as measured by the amount of residual air



and expressed as a percentage of the total lung volume, a striking correlation was noted (table 2). In a total of forty-five individuals who had either no emphysema or only a slight degree of emphysema none presented the typical electrocardiographic picture of right heart strain. However, six of the forty-five patients (13 per cent) with a moderate degree of emphysema showed these changes. The incidence of right heart strain mounted precipitously in the group with an advanced degree of emphysema in which eleven of twenty-five (44 per cent) patients had right heart strain. In the far advanced group the incidence again was high, with nineteen of thirty-three (58 per cent) showing the typical changes.

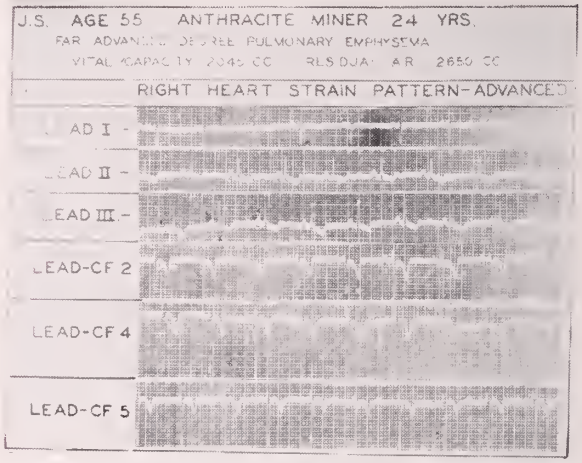
A close correlation was obtained also when the presence of right heart strain was compared with the decrease from the predicted normal

Table 3

RELATIONSHIP OF RIGHT HEART STRAIN TO DECREASE FROM PREDICTED NORMAL MAXIMAL BREATHING CAPACITY

Percent Decrease in Maximal Breathing Capacity	*Number of Cases*	*Right Heart Strain*	*Percentage*
0-25	40	2	5
25-50	37	3	8
More than 50	71	31	44

maximal breathing capacity (table 3). When the maximal breathing capacity was reduced to 25 per cent only two instances of right heart



strain were found in forty patients (5 per cent). When the reduction in maximal breathing capacity was in the range of 25 to 50 per cent only three of thirty-seven patients (8 per cent) showed right heart strain. However, in the group with a reduction of more than 50 per cent thirty-one out of seventy-one individuals (44 per cent) showed right heart strain.

Table 4

RIGHT HEART STRAIN IN RELATIONSHIP TO MEAN PARTIAL PRESSURE OF OXYGEN IN ARTERIAL BLOOD (pO_2)

pO_2, mm. Hg.	*Number of Cases*	*Right Heart Strain*	*Percentage*
80-100	37	2	5
70-79	46	11	24
60-69	29	9	31
50-59	12	6	50
Below 50	3	2	66

The correlation between the incidence of right heart strain and the mean partial pressure

of oxygen (pO_2) in the arterial blood is presented in table 4. It is seen here that in general the lower the resting pO_2 the greater the incidence of right heart strain; however, it will be noted that certain individuals with a pO_2 between 80 and 100 mm.Hg. showed evidence of right heart strain. It is probable that these individuals exhibit extreme drops in pO_2 on exercise, with resultant great increases in pulmonary artery pressures.

DISCUSSION

The results presented here indicate that in the group of patients studied the chief effect upon the heart is produced by the presence of emphysema. Massive fibrosis in itself does not appear to increase the work of the right side of the heart. This is evidenced by the total lack of correlation between the x-ray stage of anthracosilicosis and the incidence of right heart strain. It is probable, however, that the smaller amount of fibrosis deposited around the terminal bronchioles and not visable by x-ray plays a prominent role both in the production of emphysema and right heart strain. Riley *et al.*[8] measured the cardiac output and pulmonary artery pressures in a group of normal subjects, also in a group with a variety of pulmonary diseases. They found that in a normal group the mean pressure in the pulmonary artery and the vascular resistance in the lungs fell, and that the work of the right ventricle was not significantly increased during exercise. However, in patients with chronic pulmonary disease the expansibility of the pulmonary vascular bed during exercises was limited as demonstrated by a significant rise in pulmonary artery pressure on exercise. They found that the work of the right ventricle was invariably higher than in normal subjects on a corresponding work level. The significance of this study in relationship to patients with anthracosilicosis is evident. These individuals with the strenuous efforts inherent in their type of work must of necessity develop long periods of pulmonary hypertension. As the degree of emphysema increases the strain placed upon the right heart eventually has its effect in hypertrophy, then dilitation and eventually failure of this chamber. The electrocardiographic changes mirror the underlying pathologic process involved in the increased load under which the right ventricle labors.

CONCLUSIONS

1. Electrocardiographic findings are presented in a group of 148 individuals on whom tests of pulmonary function had been performed.

2. No correlation could be found between the incidence of right heart strain and the x-ray stage of anthracosilicosis.

3. A close correlation was noted between the incidence of right heart strain and both the degree of pulmonary emphysema and the decrease from predicted normal in the maximal breathing capacity.

4. It was noted that in general the lower the mean partial pressure of oxygen in arterial blood, the greater the incidence of right heart strain.

REFERENCES

1. Charr, R., & Savacool, J. W.: Dyspnea in Anthracosilicosis; Clinico-Pathological Study, Penna. Med. J. 42:35, 1938.
2. Coggin, C. B., Griggs, D. E., & Stilson, W. L.: Heart in Pneumoconiosis, Am. Heart J. 16:411, 1938.
3. Parker, R. L.: Pulmonary Emphysema: A Study of its Relation to the Heart and Pulmonary Arterial System, Ann. Int. Med. 14:795, 1940.
4. Myers, G. B., Klein, H. A., & Stofer, B. E.: The Electrocardiographic Diagnosis of Right Ventricular Hypertrophy, Am. Heart J. 35:1, 1948.
5. Motley, H. L., Lang, L. P., & Gordon, B.: Pulmonary Emphysema and Ventilation Measurements in 100 Anthracite Coal Miners with Respiratory Complaints, Am. Rev. Tuberc. 3:270, 1949.
6. Riley, R. L., Proemmel, D. D., & Frank, R. E.: A Direct Method for Determination of Oxygen and Carbon Dioxide Tensions in Blood, J. Biol. Chem. 161:621, 1945.
7. Katz, L. N.: Electrocardiography, Philadelphia, Lea & Febiger, 1946, p. 185.
8. Riley, R. L., Himmelstein, A., Motley, H. L., Weiner, H. M., & Cournand, A.: Studies of the Pulmonary Circulation at Rest and Exercise in Normal Individuals and in Patients with Chronic Pulmonary Disease, Am. J. Physiol. 152:372, (Feb.) 1948.

INCREASE IN AGED POPULATION

According to the Metropolitan Life Insurance Company's Statistical Bulletin (September 1949), there were 101,271 persons 65 years of age and over in West Virginia in 1940. This total number had risen to 120,048 in 1948, an increase of 18,777, or 18.5 per cent.

The rate of increase in the United States as a whole for that same period was 21.3 per cent.

According to the Bulletin, in 1940 there were about 9,000,000 people in the United States aged 65 and over, but by 1948 the number had jumped to nearly 11,000,000. The population in this age group increased by nearly 2,000,000, or 21 per cent, as compared with an increase of but 11 per cent in the total population.

BONE BANKS

Bone banks, made possible by improved methods of freezing and preserving bone, have been set up in Navy hospitals. According to Lieutenant George W. Hyatt, these banks will shorten operating time about 30 per cent; will necessitate only one operation in autogenous surgery (moving a patient's bone from one area to another); will favor quick recovery due to less pain and shock; and reduce the number of blood transfusions.—R. N.

THE CLINICAL EVALUATION OF DISABILITY IN ANTHRACOSILICOSIS[1, 2, 3]

By PETER A. THEODOS, M. D.,
Philadelphia, Pa.

It long has been recognized that anthracosilicosis is a disabling disease, but the evaluation of this disability has been hampered by lack of agreement as to what constitutes disability, and by the limitations of the methods ordinarily used for its determination. The recent advances in respiratory physiology have thrown light on the complex nature of the pulmonary impairment and afford additional information for a more adequate evaluation of pulmonary disability. However, until pulmonary function tests are more generally available it still will be necessary to evaluate disability on a purely clinical basis.

During the past year and a half an unselected group of 375 hard coal miners and 60 soft coal miners with various stages of silicosis have been admitted to the Barton Memorial Division of Jefferson Hospital for detailed study of their pulmonary function from a clinical and physiologic standpoint. The findings in the hard coal group have been reported elsewhere[1]. The present report deals chiefly with the findings in the soft coal group. In these cases an evaluation of the nature and degree of disability was made from the clinical examination and the findings correlated with the pulmonary function studies. An opportunity was afforded, therefore, for evaluation of the efficiency and limitations of the clinical observation.

METHODS OF STUDY

Upon admission to the hospital a complete occupational and medical history was obtained, particularly with regard to the nature and duration of occupational exposure, the actual cause for work stoppage and the present complaints. A general physical examination was then made, with special attention to the chest. Note was especially made of the appearance and movements of the chest, the degree of expansion and the presence and character of rales. The patient was then subjected to a routine exercise test consisting of 30 step-ups on a 9 inch stool. The pulse, blood pressure and respiratory rate were recorded before the exercise and two minutes after, with the patient lying flat in bed.

Routine laboratory studies were obtained including sputum examinations (plain smears, concentrates, fasting gastric contents), urinalysis, complete blood count, sedimentation rate, blood serology, fasting blood sugar, urea nitrogen, serum proteins, tuberculin test, and an electrocardiogram.

Fluoroscopic study to note the movement of the diaphragm was carried out, as well as roentgenograms of the chest taken in deep inspiration and expiration.

Bronchoscopy was performed in suspected cases of tuberculosis when the sputum was negative and when neoplasm was considered. In cases in which bronchiectasis or atelectasis was suspected, bronchography with iodized oil was employed.

Upon completion of these studies the miner was then subjected to physiologic studies of his pulmonary function. The degree of pulmonary emphysema was evaluated from quantitative measurements of residual air as determined by the oxygen open circuit method[2, 3]. The residual air was expressed as per cent of the total lung volume (residual air plus vital capacity). Maximum breathing capacity, vital capacity and supplemental or reserve air were determined with a modified Benedict-Roth Metabolism Apparatus[3, 4]. Studies of the respiratory gas exchange were made from analysis of the expired air and from arterial blood drawn directly from the brachial artery[5,6].

MEDICAL FINDINGS

Data obtained from the history are summarized in tables 1, 2 and 3. It was noted that 8 miners (13.3 per cent) were still working at time of study, the rest having stopped work up to 15 years prior, the average period of disability being 2 1/5 years. The majority of miners were in the 41 to 60 age group, the average age being 53 years and the average underground exposure 32 years.

Significant previous respiratory infections were present in a little more than half the cases but in only three cases was the question of tuberculosis raised in the past history.

The chief causes for work stoppage in the group of 52 who had stopped work are shown in table 2. In the great majority of cases the miner was forced to stop work and leave the mines because of varying degrees of dyspnea. In 6 of these cases onset of dyspnea was abrupt but in the rest it was gradual in onset and was present from one to twelve years before causing work stoppage (table 3).

---

[1]From the Barton Memorial Division of the Jefferson Medical College Hospital and the Department of Medicine of the Jefferson Medical College of Philadelphia.

[2]A part of the expense for this investigation was defrayed by a grant from the Anthracite Health and Welfare Fund of the Jefferson Medical College Hospital.

[3]Presented before a meeting of the West Virginia Chapter of the American College of Chest Physicians at Charleston, May 17, 1949.

The symptoms at time of study are shown in table 4. Dyspnea was complained of in the vast majority of cases (91.8 per cent), with varying degrees of cough and expectoration also prominent features. Hemoptysis was rather uncommon, occuring only in 20 per cent of cases.

The significant findings on physical examination are shown in table 5. The state of nutrition was generally good except in those cases with advanced stages of function impairment. The presence of significant emphysema was suspected from the appearance of the chest and measurements of expansion in over 50 per cent

Table 1

FINDINGS FROM HISTORY OF 60 SOFT COAL MINERS

	Years	*Average*
Age Range	35-78	53
Inside Exposure Range	16-48	32
Range of Work Stoppage	0-15	2 1/5

Past History	*No.*	*Per Cent*
Disabling Colds	15	25.0
Bronchitis	2	3.3
Pleurisy	8	13.7
Pneumonia	11	18.3
Total Respiratory Infections	40	66.6
Suspected Tuberculosis	3	5.0
Heart Disease	7	11.6

Table 2

CHIEF CAUSE FOR WORK STOPPAGE

Symptom	*No.*	*Per Cent*
Dyspnea	35	58.3
Weakness	5	8.3
Chest Cold	2	3.3
Chest Pain	3	5.0
Non-Medical (Injury, laid off, etc.)	7	11.6

Table 3

LENGTH OF DYSPNEA BEFORE WORK STOPPAGE

Years	*No.*	*Per Cent*
Up to 1	11	18.3
1-2	10	16.7
2-3	10	16.7
3-4	8	13.7
4-5	3	5.0
Above 5	11	18.3

Table 4

PRESENT SYMPTOMS

Symptoms	*No.*	*Per Cent*
Dyspnea	55	91.8
Cough	45	75.0
Expectoration	43	71.6
Weakness	43	71.6
Weight Loss	34	56.7
Pain	31	51.6
Hemoptysis	12	20.0
Night Sweats	7	11.6

Table 5

SIGNIFICANT FINDINGS ON PHYSICAL EXAMINATION

State of Nutrition	*No.*	*Per Cent*
Poor	11	18.3
Fair	14	23.3
Good	35	58.3
Obvious Dyspnea at Rest	6	10.0
Emphysematous Type Chest	39	65.0
Limitation of Expansion (5 cm. or less)	44	73.3
Abnormal Breath Sounds	8	13.3
Localized Moist Rales	3	5.0
Musical Rales	12	20.0
Clubbed Fingers	2	3.3
Curvature of Finger Nails	4	6.7
Cardiac Arrhythmia	5	8.3
Peripheral Edema	3	5.0

Table 6

SIGNIFICANT LABORATORY FINDINGS

SPUTUM

Average amount in 24 hours:
- Non-infected ..... 15 Gm.
- Infected ..... 49 Gm.

Positive for acid-fast bacilli — None.

BLOOD COUNT

Hg. in Gm.	*No.*	*Per Cent*
Below 10	--	--
10-12	3	5.0
12-14	19	31.7
14+	38	63.3

RBC in millions	*No.*	*Per Cent*
2-3	--	--
3-4	7	11.6
4-5	32	53.4
5-	21	35.0

WBC in thousands	*No.*	*Per Cent*
Below 6	18	30.0
6-8	27	45.0
8-10	12	20.0
10+	3	5.0

URINE	*No.*	*Per Cent*
Albumin	4	6.7
Sugar	--	--
Pus	6	10.0
Casts	4	6.7
Poor Concentration	7	11.6

FASTING BLOOD SUGAR

Mg. Per 100 cc.	*No.*	*Per Cent*
Below 60	4	6.7
61-80	40	66.6
81-100	16	26.7
101-120	--	--
120+	--	--

TUBERCULIN TEST	*No.*	*Per Cent*
Positive	42	70
Negative	18	30

OTHER BLOOD STUDIES	*No.*	*Per Cent*
Urea Nitrogen above 20 mg. per 100 cc.	1	1.7
Serology:		
Negative	59	98.3
Positive	1	1.7

RANGE OF BLOOD PROTEINS ..... 6.36-8.69 Gm.
- Albumin ..... 3.02-7.18 Gm.
- Globulin ..... 1.0 -4.6 Gm.

REVERSAL OF A/G RATIO 2 (3.3%)

AVERAGE SEDIMENTATION RATE 27

of cases. On an average, the circumference of the chest at the nipple line was recorded as 36 inches (90 cm.) on deep inspiration and 34 inches (85 cm.) on deep expiration.

The resting pulse was found generally normal (average 83) except in those cases in which significant infection was present. The blood pressure was normal or consistent with the patient's age in all but 11 cases. In these 11 cases definite hypertension was present even after prolonged rest. The respiratory rate was 20 per minute or below in about half the cases (52 per cent), the average rate for the whole group being 23 respirations per minute. A total of 16 (26.8 per cent) were not subjected to or could not complete the exercise because of age factors, weakness, dyspnea or manifest medical conditions which contraindicated its use. In the 44 cases in which the test was completed, only 11 (22.7 per cent) showed failure of the pulse to return to the pre-exercise level and 19 (43.2 per cent) showed significant changes in the blood pressure. The respiratory rate returned to the pre-exercise level in only 16 cases (36.3 per cent). In the rest, 20 (45.4 per cent) showed an increase of 4 respirations and the balance (18.3 per cent) an increase of 5 to 8 respirations per minute.

The significant laboratory findings are shown in table 6. Varying amounts of sputum were obtained in all but 5 cases. In no instance were acid-fast bacilli found despite concentrates, examination of the fasting gastric contents and bronchoscopy in 9 cases. This is in marked contrast to the group of hard coal miners in whom a positive sputum was obtained in 11.7 per cent of cases.[1] There was also a higher percentage of negative reactors to the tuberculin test (both strengths PPD) in the soft coal group (30 per cent) as compared with the hard coal group (10.5 per cent). Another finding of significance was the persistently low fasting blood sugar, over 70 per cent being below 80 milligrams per hundred cubic centimeters.

Electrocardiograms were done in 23 cases. Of these, 6 (26 per cent) showed evidences of right heart strain. The diagnosis was based on the presence of a deep S wave in leads I and III, a depressed and bowed down RST segment in lead III, tall peaked P waves in leads II and III, with inversion of the P waves and small R and deep S waves in the precordial leads.

The fluoroscopic and roentgenographic findings are summarized in table 7. Classification was based upon the system proposed by the Committee on Pneumoconiosis of the American Public Health Association in which the size of the nodulation determined the stage. The so-called linear and granular phases have been considered as normal or borderline, nodules up to 2 mm. in diameter as first stage· nodules up to 6 mm. as second stage, and anything beyond this as third stage, particularly when coalescence and conglomeration were present. Not all cases with definite silicosis showed this nodular pattern, some cases being characterized by linear fibrotic changes of varying degrees. These cases were classed as stage one or two according to the degree of involvment.

CORRELATION WITH PULMONARY FUNCTION STUDIES

The occurrence of 43 associated medical conditions in the 60 cases under consideration is indicated in table 8. It is considered that these conditions individually or in combination were sufficient to produce disability in 16 cases (26.7 per cent) regardless of the degree of pulmonary function impairment due to silicosis *per se*. In the remaining 44 cases no demonstrable disabling medical condition was found to be present and silicosis was regarded as producing the main disability on a pulmonary basis. Function tests were performed on those cases and the results correlated with the clinical impressions. The amount of emphysema and the degree of pulmonary impairment at time of admission were estimated on the basis of history, physical examination, exercise tolerance test and the roentgenogram. The clinical impressions were then compared with the results of the pulmonary function studies.

Table 9 shows a comparison of the degree of emphysema predicted after physical examination, the degree predicted from the roentgenogram, and that determined by estimation of the residual air. The correct degree of emphysema was predicted in 19 of the 44 cases (43.2 percent) by physical examination alone and in 32 cases (72.7 per cent) on the basis of the fluoroscopic findings and the roentgenograms. The limitation of clinical observations in this respect is further emphasized in table 10 in which a correlation between the appearance of the chest (barrel-shaped) and the true degree of emphysema is shown. The correct degree of emphysema from this observation alone can be made only in a little over 50 per cent of cases.

In table 11 can be seen the correlation between the predicted and actual impairment. The corrected degree of impairment was predicted only in a little over half of the cases (56.8 per cent). The response to the exercise test is

one of the factors used in estimating disability on a clinical basis. Table 12 shows that there is no constant relationship between the increase in respiratory rate, the degree of emphysema or the degree of pulmonary function impairment in the group of 38 who were subjected to the exercise.

DISCUSSION

Accurate evaluation of disability in anthracosilicosis requires consideration of all the factors involved and the correlation of symptoms, signs, laboratory and roentgenologic findings. Associated medical conditions must be evaluated as to their influence on pulmonary function. In approximately one-fourth of the cases studied the medical conditions present were sufficiently disabling to cause work stoppage. These were primarily related to cardiovascular disturbances. This type of disability is generally easily detected by clinical means.

Table 7

FLUOROSCOPIC AND ROENTGENOGRAPHIC FINDINGS

Stage of Anthracosilicosis	*No.*	*Per Cent*
Normal or Borderline	7	11.6
1st Stage	11	18.3
2nd Stage	9	15.0
3rd Stage	33	55.0
Asymmetrical Distribution	22	36.7
Deviation of Trachea		
To the Right	15	25.0
To the Left	6	10.0
Pleural Adhesions	16	26.8
Enlarged Heart	4	6.7
Impaired Diaphragmatic Motion		
Slight	35	58.3
Moderate	11	18.3
Marked	14	23.4

Table 8

SIGNIFICANT MEDICAL CONDITIONS

Diagnosis	*No.*	*Per Cent*
Cardiovascular Diseases	13	21.7
Arterial Hypertension	11	18.3
Non-Specific Secondary Infection	4	6.7
Chronic Nephritis	3	5.0
Arthritis	2	3.3
Generalized Arteriosclerosis	2	3.3
Bronchiectasis	2	3.3
Inguinal Hernia	2	3.3
Bronchial Asthma	1	1.7
Peripheral Vascular Disease	1	1.7
Syphilis	1	1.7
Paralysis Agitans	1	1.7

Adequate physiologic study of pulmonary function requires measurements on ventilation, the degree of emphysema and the respiratory gas exchange both at rest and during exercise[6]. The arterial oxygen saturation in anthracosilicosis may be produced by factors which may be grouped as follows:

1. Ventilation—decreased maximum breathing capacity and decreased vital capacity.

2. Emphysema—increased residual air, with the residual air per cent of total lung volume increased.

3. Ventilation efficiency—decreased O_2 uptake and addition of CO_2 to air breathed.

4. Distribution—unequal alveolar aeration and perfusion. These factors may be involved in anthracosilicosis in varying degrees and combinations. It is this fact which makes estimation of function impairment from a clinical examination so difficult. Marked decreases in ventilation and advanced degrees of emphysema can be readily recognized by clinical methods and their influence on function impairment predicted. However, when the difficulty is primarily in the respiratory gas exchange the degree of pulmonary function impairment can not be readily determined from the clinical examination.

In the absence of pulmonary function studies, reliance still must be upon the history, physical examination, response to exercise tests and the roentgenographic picture. While the history will indicate the severity of disability, it may be misleading. A marked disparity between the complaints and the actual degree of impairment was not uncommon and frequently the degree of impairment differed where the degree of dyspnea appeared the same.

Emphysema usually is regarded as a chief factor in the production of disability in anthra-

Table 9

DEGREE OF EMPHYSEMA IN 44 CASES

Degree of Emphysema	*Based on Estimation of Residual Air*	*Predicted by Physical Examination*	*Correctly Predicted*		*Predicted by X-ray*	*Correctly Predicted*	
			No.	*Per Cent*		*No.*	*Per Cent*
None or Slight	19	21	10	52.5	24	17	70.1
Moderate	14	19	6	23.3	7	5	71.5
Advanced or Far Advanced	11	4	3	36.7	13	10	76.8
Totals	44	44	19	43.2	44	32	72.7

cosilicosis. As shown by table 9, the degree of emphysema can be better estimated from the x-ray findings than from the physical examination. The barrel-shaped appearance of the chest may be very misleading in estimating the degree of emphysema, as shown in table 10.

The step-up exercise test is of limited value in determining pulmonary function impairment. Some information may be obtained as to the cardiac and respiratory reserve but interpretation of the results may be difficult and misleading. In general, absence of circulatory embarrassment was indicated when the pulse and blood pressure were within normal limits before exercise and returned to normal within a two minute period of rest following exercise. Similarly, absence of respiratory embarrassment was indicated when the respiratory rate was normal before and after exercise and when the expiratory phase was not unduly prolonged. However, as shown by table 12 there was no constant relationship between changes in the respiratory rate and the degree of emphysema or severity of the function impairment.

Table 10

PREDICTION OF DEGREE OF EMPHYSEMA IN EMPHYSEMATOUS TYPE CHEST

Barrel-shaped Appearance	*No.*	*Degree of Emphysema Correctly Predicted* *No.*	*Per Cent*
Normal or Slight	19	10	52.5
Moderate	18	9	50.0
Marked	7	5	71.5
Total	44	24	54.5

SUMMARY AND CONCLUSIONS

The clinical features of disability in a group of 60 soft coal miners with various stages of silicosis have been studied and the clinical findings correlated with pulmonary function studies.

Evaluation of disability requires recognition and consideration of all factors which may contribute to the function impairment. In 26.7 per cent disability was related to one or more infectious, metabolic or degenerative medical conditions. In 73.3 per cent of cases disability was due to pulmonary function impairment *per se*, related to ventilatory charges, the degree of emphysema and the respiratory gas exchange. The factors involved were multiple in most cases.

A fair estimate of the degree of function impairment can be obtained by the usual clinical methods when the major factors in the impairment are related to decreased ventilation and increased emphysema. Clinical examination will not reveal impairment due to arterial blood oxygen unsaturation.

REFERENCES

1. Theodos, P. A., Gordon B., Lang, L. P., & Motley, H. L.: Studies in the Clinical Evaluation of Disability in Anthracosilicosis, Diseases of the Chest, accepted for publication, 1949.
2. Darling, R. C., Cournand, A., & Richards, D. W., Jr.: Studies on Intrapulmonary Mixture of Gasses: An Open Circuit Method for Measuring Residual Air, J. Clin. Invest. 19:609, 1940.
3. Motley, H. L., Lang, Leonard P., & Gordon, Burgess: Total Lung Volume and Ventilation Measurements in One Hundred Anthracite Coal Miners with

Table 11

PREDICTION OF DEGREE OF FUNCTION IMPAIRMENT

Degree of Impairment	*Predicted by Physical Examination*	*Based on Function Tests*	*Correctly Predicted* *No.*	*Per Cent*
None or Slight	16	13	10	62.5
Moderate	15	16	6	37.5
Advanced or Far Advanced	13	15	9	60.0
Total	44	44	25	56.8

Table 12

RELATIONSHIP BETWEEN EXERCISE, DEGREE OF EMPHYSEMA AND FUNCTION IMPAIRMENT

Increased Respirations	*No.*	EMPHYSEMA *None or Slight*	*Moderate*	*Advanced or Far Advanced*	FUNCTION IMPAIRMENT *None or Slight*	*Moderate*	*Advanced or Far Advanced*
None	12	7	5	---	5	6	1
1 - 4	19	6	6	7	5	4	10
5 - 8	7	4	1	2	1	3	3

Respiratory Complaints, Am. Rev. of Tuberc. 59: 270-288, 1949.

4. Motley, H. L., Lang, L. P., & Gordon, B.: Total Lung Volume and Maximal Breathing Capacity (MBC) in Pulmonary Emphysema After Repeated Periods of Intermittent Positive Pressure Breathing (IPPB), J. Aviation Med. 19:346-354, 1948.
5. Motley, H. L., & Lang, L. P.: The Nature of the Breathing Impairment in Anthracosilicosis, Federation Proceedings 8:114, 1949.
6. Motley, H. L., Gordon, B., Lang, L. P., & Theodos, P. A.: Pulmonary Function Impairment in Anthracosilicosis, J. A. M. A. 1949, in press.

CEREBRAL PALSY—A PH PROBLEM

It is assumed that there are seven cerebral palsy children born yearly to each 100,000 population. According to certain investigators, six survive the age of 6 years. Dr. Winthrop Phelps estimates the total number, under the age of 21 years, in the United States as 176,000. But estimates vary widely.

It seems that the number of children disabled by cerebral palsy is double that given for the victims of poliomyelitis. If the figures alone were not impressive, the fact that the disease usually strikes at birth, disabling the young population, adds extra weight to the problem.

While special facilities are needed in the care of the cerebral palsy child, one should guard against setting these children apart from other children as "an island unto themselves." They are children first of all with needs common to all children.

Just as Rh factor determination in all pregnant women will benefit all parents and all newborn, improvement of any phase of medical and educational care will in serving the cerebral palsy child better the lot of others. In asking for adequate care for the cerebral palsy child we are actually asking for better care for all children.—Eve Landsberg, M. D., in J. American Med. Women's Assn.

ALLERGIES OF THE EYES

Allergies of the eyes are becoming more and more frequent and for good reason. In the non-medical field of activity cosmetics are offering probably more allergic problems than any other. During the war this was particularly true, due to the use of inferior products to replace those unavailable for one reason or another.

The main offenders are powder and nail-polish, and let me hurry to add that I do not object to their use, but cases we do see, and we must help them promptly and efficiently.

Testing for the special allergen takes too much time and, in my experience, I find it better to withdraw all cosmetics, including a complete cleaning of the dressing table, and storing away of all the preparations in it in a tightly-wrapped container and placing it in storage so that no further contact will be made with it. The eyes will then clear rapidly with palliative medication and at this point one-by-one the same old cosmetics may be purchased and tried until the offending one is found.—Ralph S. McLaughlin, M. D., in J. Med. Assn., Georgia.

PROGRESS IN MEDICINE SINCE I GRADUATED IN 1893*

By T. W. MOORE, M. D.,
Huntington, W. Va.

Had I been the Rip Van Winkle of my class, destined to slumber peacefully through the fifty-five years of astounding medical progress since I was graduated from the Medico-Chirurgical College in Philadelphia in 1893, I should awaken today to find commonly accepted a plethora of medical miracles undreamed of in the early nineties. Those of us whose medical lives have bridged the last half century have been privileged to practice medicine in a distinctly modern age. Practically all of modern medicine is included within the period from 1893 to 1948.

During my lifetime the entire science of bacteriology has been developed. It was introduced into the United States in 1878, the year that brought the blood pressure apparatus and Edison's platinum wire electric lamp. Four years later, Koch discovered the tubercle bacillus. The decade of the eighties witnessed the identification of gonococcus, streptococcus, pneumococcus, leprosy bacillus and the organisms of typhoid and malaria, also the causative agents of diphtheria, meningitis, cholera and undulant fever. While I was in medical college, a course in bacteriology requiring twenty hours with the microscope was introduced. At that time my alma mater claimed to be the only college offering such a course. It was not long, however, before medical students were gaining the impression tha they must live out their medical lives fighting bacteria.

In those days, the requirements of medical colleges were very low. While the catalogues all stated that the entrant must have at least a high school education, this rule was by no means enforced. Anyone who desired to do so could matriculate with much lower qualifications. Too, there were any number of medical schools in operation. In the city of Louisville, for example, there were seven; Cincinnati had five. The courses in many of these schools, as a writer of the time said, consisted of two terms of lectures, each of five months' duration and always the same, jokes and all.

Pasteur, in 1885, had perfected his preventive treatment of hydrophobia, which remains much the same today. So, when I received my diploma, this therapy for rabies had barely been

*President's Address presented before the Association of Surgeons of the Chesapeake & Ohio Railway at White Sulphur Springs, West Virginia, November 1, 1948.

in use long enough to be accepted as scientific and trustworthy. At that time vaccination for smallpox was of course a recognized procedure, but biochemistry was still truly in its infancy.

Von Behring, in 1889, announced his results with antitoxins, and in 1894 Roux gave to the world diphtheria antitoxin. Well do I remember the feelings of hope and doubt engendered when in his classic thesis on its use Welch, in 1895, told us all that we know about it now except for its intravenous administration and the larger dosage now given. He recommended a maximal initial dose of 5,000 units. For years we physicians who were convinced of its efficacy had to struggle against its failure due in most cases to late administration and small dosage. In a town near my home where diphtheria was endemic five years after the introduction of diphtheria antitoxin, my boyhood friend, the local physician, said to me, "Tom, for the last ten years I have kept an account, and there have been just as many deaths with antitoxin as without it." The people of this community had little money, and it was hard for them to pay for the antitoxin; furthermore, it was difficult to persuade the parents to permit its administration until convinced the patient would not recover without it. By that time it was too late. Satisfactory protection against diphtheria with antitoxin did not come until twelve years after the turn of the century, and later came the Schick test to determine susceptibility to this disease.

In 1895, two years after my graduation, there came the anouncement of Roentgen's discovery of the x-ray. One wonders today how medicine could be practiced in any modern sense without this invaluable diagnostic and therapeutic aid. That same year the Nobel Prize Foundation was established.

Three years later the Curies discovered radium. From this milestone of medical progress stemmed the knowledge of the behavior of the atom with demonstration of the size, weight, electrical force, speed of action and half life value of its different parts. This, in turn, brought atomic fission which made possible the atomic bomb with the consequent incalculable potentialities in war and in peace. Isotopes, tagged on to many elements, now tell a graphic story in medicine as they are observed trouping through the body.

As late as 1900 Sidney Stephenson was of the opinion that 60 per cent of all cases of iritis and uveitis were due to syphilis. Our favorite treatment was atropine and intravenous injections of cyanide of mercury, pushed until there was the physiologic reaction of intestinal pain and, if further continued, bloody diarrhea. Today, the various observers estimate that in from 4 to 20 per cent of these cases there is this etiology. Yet, tragic as it may seem, our results were as good, or even better, than they are today, possibly excepting the results obtained within the last year by the use of streptomycin. The Wassermann test was yet to come (in 1908) and our diagnosis was based largely on the history given, which was then less dependable than it is today. The Kahn test for syphilis was not available until 1921.

By 1910, the year Erlich developed salvarsan, blood grouping had been defined, hormones had been investigated, and the cause of whooping cough had been isolated. Those mysterious substances, the vitamins, were announced the next year. Now more than half a dozen are available for everyday practical use, and others are under investigation.

In the early twenties, insulin and the sunlight treatment of rickets came into use, with the liver diet for pernicious anemia following in 1926. As early as 1929 Florey did his first work on penicillin, and 1935 brought the sulfonamides. Since then streptomycin has become available, also tyrothricin and other antibiotics which give much promise. New antimalarials and antiseptics are likewise now making their contribution to medical progress.

True enough, loath as the physician is to admit in retrospect that he has been deluded, some of these therapies have had to run the gamut of overenthusiasm and disillusionment. For example one valuable lesson learned is that penicillin will cure in some instances but not in others. Since the production of this antibiotic agent has progressed from scarcity to plenty, clinical reports have outnumbered and superceded in general interest some of the basic laboratory investigations regarding its application. Likewise, some loudly heralded uses of the sulfonamide compounds as prophylactic and curative agents have not proved to be justified. Nevertheless, the milestones of professional achievement exceed in number and importance to a remarkable degree those of any like span of years in history.

SUMMARY

In retrospect, the accomplishments across the years of my medical lifetime seem legion. To unfold the dramatic panorama one need only mention in review such highlights as the con-

quest of bacteria, the development of vaccines following the discovery of the germs causing the various diseases from typhoid to tetanus, and the knowledge acquired concerning the virus diseases, the spirochetes, such protozoa as the malarial organism and other infectious agents. Who would wish to practice medicine today without roentgen ray, radium, isotopes, chemotherapy in all its various aspects, the present knowledge of all endocrines, and physiotherapy with its numerous uses? One wonders how professional colleagues of yesteryear could ever have practiced medicine with success.

Transfusions as life-saving measures and as diagnostic aids have come into their own. The bronchoscope, the gastroscope, the electrocardiograph and the encephalograph now make their contribution to diagnosis. Surgery, particularly of the heart and lungs, has made great strides, and improved methods of anesthesia now aid the surgeon. Blood banks and eye banks are being built up over the nation, and many of the mentally ill are being restored by shock therapy.

This thrilling drama of medicine across the five and a half decades of my medical life span makes an intricate mosaic, a composite of countless pieces individually contributed. A study of man's cumulative experience throughout the past throws light on his problems of the present and the future. With pride and deep personal satisfaction we review the accomplishments within our profession during the last half century; they enable us to face the future with courage tempered with caution and with the thrill of a great expectancy. Is the conquest of cancer through atomic energy just around the corner? What answers to cardiovascular disease, to senility and to mental ills perhaps lie immediately ahead? Too, what new problems lurk in the steadily increasing average life span?

We oldsters count it a glorious privilege to have lived our medical lives during this greatest period of professional development. The lines on our faces are the etchings of experience. The fruits of our experience we gladly give to our younger colleagues for the asking. As we look backward, let us look forward.

VACCINATE AND REVACCINATE

The American people cannot afford to be complacent about smallpox as long as there is a single case of the disease within our borders. Even when the disease is completely wiped out, vaccination and revaccination must continue in order to guard against a possible flare-up from cases which may unwittingly come into out country.—Statistical Bulletin, Metropolitan Life Insurance Company.

STATUS OF PHARMACOLOGY

In no period of medical history has knowledge of drugs advanced so rapidly as in the last quarter century; and the present phenomenal rate of progress shows no sign of abating. One result of the enormous increase in the potent drugs available to the physician has been a healthy tendency to regard diagnosis no longer as an end in itself but as the necessary preliminary to treatment. But there is some danger of a new therapeutic nihilism arising from disappointment or even disaster following the use of these newer remedies.

All active drugs may be either ineffective or dangerous if incorrectly used, and the fine new weapons which science has given us can often become lethal in the hands of the ignorant. Pharmacological principles must be thoroughly understood if the modern drugs are to be applied rationally and effectively and if the results of therapy and the claims made for new drugs are to be intelligently assessed.

Practical therapeutics, which involves much more than the use of drugs, must be taught mainly by the clinician at the bedside, but the teaching of pharmacotherapeutics will fail if it is not superimposed on a sound knowledge of modern pharmacology.

A medical man will be learning the use of drugs all his life but the pharmacological laboratory affords him his only formal opportunity to learn the essential facts concerning the actions and modes of action of drugs and the principles underlying them, and such knowledge becomes more important every year.—The Lancet.

LIVE WITHIN PHYSICAL LIMITATIONS

From the enticing prospects of pediatric preventive medicine one must turn to the rapidly growing and newer field of geriatrics. Advances here have been concerned with the problem of preventing or delaying the consequences of the nonpreventable, noncurable disease. These diseases—heart disease, cancer and nephritis—are the three leading causes of death and, together with cerebrovascular accidents, the fourth cause, represent the etiology of the disability of the aged and aging.

At the present time one cannot do a great deal to prevent or cure these diseases; geriatrics is making most of its progress by teaching people how to live with, and within, their physical limitations.—Miriam D. Manning, M. D., in New England J. Med.

PSYCHIATRY AND RELIGION

Psychiatry and religion, although they have some common frontiers, are really two entirely different endeavors. While religion attempts to provide all men with a spiritual and emotional adjustment, psychiatry is a specialized branch of medicine which has to do with diagnosis and treatment of abnormal personalities and mental diseases.

While the minister must be ever alert for the unexpected development of mental illness in a member of his flock, the psychiatrist must recognize the natural need for religion in his patients and not overlook the importance of this factor in their rehabilitation.—John D. Campbell, M. D., in J. Med. Assn. Georgia.

The President's Page

The West Virginia State Medical Association has repeatedly advocated the extension of public health in our state so that each county will have full-time coverage.

Recently, we have been instrumental in having bills enacted by the Legislature providing for the licensing of hospitals and the reorganization of the State Department of Health. We feel that these acts will provide the means by which we can establish a department of health that will be of real benefit to the citizens of our state.

But, we must realize that the acts give tremendous powers to appointive officers. If such powers are used wisely and humanely, they can be of real benefit, but if they are used in a dictatorial manner they can cause much harm to our health program. Certainly, politics or political ambitions do not have any place in a public health program.

The hospital licensing act carries with it the power to license institutions that have five or more beds. If it is carefully administered, our people will be benefited; but, if a standard is set up that is so high that it cannot be met by communities or physicians who desire to provide clinical and hospital facilities, then it becomes a definite handicap to any program that is advanced for the betterment of the health of a community.

Each community should be judged on the basis of its own needs and on its financial ability to provide facilities rather than by any standard that is set up by our national public health administration.

Until recent years, public health has always meant preventive medicine. This is its true function. Each year, however, more and more treatment has been taken over by public health agencies. If continued, this creeping monster will absorb the private practice of medicine as surely as would compulsory health insurance.

We know that any treatment that is administered solely by public health agencies becomes mass production. It is assembly line medicine and it cannot be good medicine. The individual loses his identity as he does in any form of state medicine.

It is necessary only to observe the type of medicine that is practiced in some of our large city public health clinics and in some of our school health clinics for us to realize how far such practice has strayed from what we conceive to be the ideal practice of medicine.

We need to extend legitimate public health services so that all counties will have complete coverage. These services would include sanitation, public health nursing, immunization and all phases of preventive medicine, but not an extension of therapeutic measures.

Sometime, somewhere, if the private practice of medicine is to survive, we must call a halt on treatment by these agencies. Certainly that time is now.

Thomas G. Reed.

President.

West Virginia Medical Journal

Official Journal of
The West Virginia State Medical Assaciation
302 Atlas Building, Charleston, West Virginia

Editor

Walter E. Vest, M. D. (1951) ..... Huntington

Managing Editar

Mr. Charles Lively ..... Charleston

Associate Editors

Edward J. Van Liere, M. D. (1950) ..... Morgantown
G. G. Irwin, M. D. (1952) ..... Charleston
R. H. Edwards, M. D. (1953) ..... Welch
W. M. Sheppe, M. D. (1954) ..... Wheeling

Editar Emeritus

James R. Bloss, M. D. ..... Huntingtan

Business Manager

Mr. Charles Lively ..... Charleston

Published manthly an the first day af the month, at Charleston, by The West Virginia State Medical Assaciation.

Original articles are accepted an canditian that they are cantributed exclusively to the Jaurnal.

Advertising rates furnished upon request. All advertisements must canfarm to the standard established by the Council of Pharmacy and Chemistry of the American Medical Associatian.

Address all communications to Business Manager, West Virginia Medical Journal, Bax 1031, Charlestan 24, West Virginia Telephone, Capitol 34-625.

CHAS. E. WATKINS, M. D., PRESIDENT

Dr. Charles E. Watkins, of Oak Hill, who will take office as president of the West Virginia State Medical Association, January 1, 1950, is a native West Virginian, having been born at Grafton.

After graduation from Grafton high school, he enrolled at West Virginia University where he received his A. B. degree in 1931. In 1933 he completed the first two years of his medical education at West Virginia University School of Medicine. He received his M. D. degree at the Medical College of Virginia in 1935, and served his internship at Charleston General Hospital.

Doctor Watkins was licensed to practice in West Virginia in 1936. He took a postgraduate course in public health at the University of North Carolina School of Medicine, and then located at Fayetteville for the practice of his profession. Afterwards he moved to Harvey, and then to Oak Hill, where he is at the present time engaged in general practice.

He has served as president of the Fayette County Medical Society, and this experience will prove to be most valuable to him in the discharge of his duties as president of the State Medical Association. The fact that he has had postgraduate work in public health means that he will be no stranger in this big field in which the medical profession in West Virginia is taking so much interest at the present time.

We doubt if any other state medical organization has done more than the West Virginia State Medical Association to solve the many perplexing problems of public health. Everybody knows the prominent part that the Association played recently in the passage of legislation to provide for a complete reorganization of the state health department.

Charles E. Watkins, M. D.

A great deal of work lies ahead, and Doctor Watkins is well qualified by experience and training to continue to fight for improved health conditions in this state. He has the respect and confidence of the members of the Association, who will continue to lend support to a program designed to give to our state one of the best health departments in the country.

Doctor Watkins will assume the office of president by virtue of his election as first vice president at the annual meeting at White Sulphur Springs, August 4-6, 1949, the president elect, Dr. Russell B. Bailey, of Wheeling, having died September 15, 1949.

The new president is young, active, aggressive and interested in organized medicine. As head of the West Virginia State Medical Association he deserves and will receive the full support of

the members. We extend to him congratulations and best wishes for a successful term.

"MEDICOS ON THE WARPATH"

The political weight of the healing arts has not, prior to 1949, been used in elections, certainly not en masse. However, the effort put forth in the recent special election in the Twenty-Sixth Pennsylvania Congressional District is illuminating.

In this campaign the question of compulsory sickness insurance was brought into sharp focus because one candidate openly advocated President Truman's program for socialized medicine and the other as strongly opposed it. The members of the healing arts professions, including physicians, dentists, nurses and pharmacists, organized and put on a strong campaign against the candidate supporting the socialized medicine program.

The result of the voting shows the political potential of organization and campaigning on the part of the professions. Under the headline we are using above, the Richmond Times-Dispatch discusses the subject editorially so much to the point that we quote the entire editorial:

"The role of the doctors, dentists, druggists and nurses in winning the victory for John P. Saylor, 41-year-old Republican last Tuesday in the Twenty-Sixth Congressional District of Pennsylvania, over Mrs. Robert Coffey, the Truman-endorsed "Fair Deal" Democrat, is just coming to public notice.

"The doctors and their professional allies caught wind of the fact that Mrs. Coffey was for President Truman's socialized medicine program, and they formed a central committee to fight her candidacy. Each was asked to contribute "not less than $10." With the fund thus collected they paid for 1,000 spot radio announcements over all the 15 stations within a 50-mile radius of Johnstown, largest urban center in the district.

"It is said that this was the first time in the United States that doctors have attempted direct political action with a view to defeating socialized medicine. The Cambria-Somerset Pharmaceutical Association which backed Saylor's candidacy, with approval of the State pharmaceutical organization, likewise had never gone into politics before.

"Results achieved in defeating a Truman-endorsed candidate by a surprisingly substantial majority, in the face of the fact that the 50,000 union members in the district were behind Mrs. Coffey, apparently have considerable significance. It may mean that similar methods will be used by the doctors, dentists, druggists and nurses in many other districts hereafter, and in national campaigns. Pennsylvania's Twenty-Sixth District, in other words, may turn out to have fixed a political pattern for numerous future elections. At all events, it showed what can be accomplished by professional men and women when they organize politically in self-defense."

STATE C. OF C. PLEDGES SUPPORT

The West Virginia Chamber of Commerce, at its annual meeting at White Sulphur Springs, September 3, 1949, went on record unanimously against the proposed compulsory health program, and pledged its full support to the American Medical Association in this fight.

The resolution adopted is as follows:

> The "10-YEAR PROGRAM" prepared by the Federal Security Agency and published under the title, "THE NATION'S HEALTH," carries unprecedented threats to freedom in broad areas of American life. We not only commend the members of the United States Senate who declined to create a "Department of Welfare" for effectuation of this 10-year program, but we heartily commend also and pledge our support to the officers and members of the American Medical Association who are leading the fight against adoption of this compulsory health program.

Thus, the State Chamber of Commerce continues to stand four-square with the medical profession in a program that provides for an all-out fight against bureaucratic forces in Washington which for years have been trying to socialize the medical profession.

We commend the strong stand taken by the state organization in this important matter, and on behalf of the members of The State Medical Association, extend thanks for this clear-cut expression of continued support on the Washington front.

ANTHRACOSILICOSIS NUMBER

We present herewith the Anthracosilicosis Number of the West Virginia Medical Journal. This disease problem is of more importance to the doctors in our state than to those practicing in any other state, with the possible exception of Pennsylvania. The papers speak for themselves and are the last word on the phases of the disease that is discussed.

We had hoped to include Dr. Hurley L. Motley's "Pulmonary Function Studies in Bituminous Coal Miners," a classical piece of research, but unfortunately could not do so as we experienced technical difficulties in the reproduction of some

of his charts. We are planning to publish this paper just as soon as the manuscript has been revised so as to enable us to overcome printing difficulties.

ADS CARRY IMPORTANT MESSAGES

Important messages are presented in the advertisements carried each month in the West Virginia Medical Journal. New products are announced from time to time and information is presented regarding the use of products featured. Other types of ads emphasize services rendered and commodities offered that may be used in practice, in the office, and in the home.

Doctors may rely on the statements and facts presented. We aim to include only ethical advertisements in The Journal. When writing advertisers, please tell them that you saw their ads in the West Virginia Medical Journal.

CARE'S BOOK PROGRAM

CARE, in cooperation with UNESCO, has added a Book Program to its food and textile package service. The new program, which is outlined in a news story in this issue of The Journal, has been developed for the purpose of supplying the latest medical and other scientific knowledge to professional people and students overseas.

Under the plan, endorsed by the American Medical Association, CARE and UNESCO representatives in Europe and Asia are obtaining lists of the book needs in specified scientific and technical categories from war-wrecked universities and libraries abroad. With the funds contributed by Americans, CARE then fills those needs as closely as possible by purchasing the latest and best books in those fields published in English.

All books purchased by CARE are selected from a bibliography compiled by a committee of scientists and librarians headed by Dr. Luther Evans, Librarian of Congress, with Dr. John F. Fulton· Sterling Professor of Yale Medical School, as one of the members. Concentration on books in English fills the express requests of educational institutions in foreign countries.

The various fields of medicine are one of 19 categories covered by the plan. In order to reach the greatest number of people, delivery is made to institutions only, not individuals. Countries now served are Austria, Belgium, Czechoslovakia, Finland, France, Greece, Italy, Japan, Korea, the Netherlands, Norway, Great Britian, the three western zones of Germany, and all Berlin.

Negotiations to extend the program to Poland and several Far East countries are pending.

FIELD ARMY'S TRIBUTE

The news of the sudden death of Dr. Russell B. Bailey on September 15th came as a shock to the entire state. Since his college days at West Virginia University where he was one of the all-time "greats" among centers, "Russ" Bailey, as he was affectionately called, had enjoyed a growing popularity throughout West Virginia.

Doctor Bailey had established for himself at Wheeling and elsewhere an enviable reputation as a surgeon. At the age of fifty-two, he was entering upon what promised to be a long and colorful career in public service. At the time of his death· he was the president elect of the West Virginia State Medical Association, chairman of the State Board of Health, to which he had recently been appointed by the Governor for a seven-year term, president of the West Virginia Cancer Society, and a director of the American Cancer Society.

Doctor Bailey was one of the pioneers in cancer control in West Virginia, having identified himself with the movement in 1934. His untimely death leaves a lamentable gap in all the organizations in which he served. The heartfelt sympathy of the West Virginia Cancer Society goes to his family. "Death delicately takes the best."—Field Army News Letter, West Virginia Cancer Society.

MEDICINE'S RESPONSIBILITY

According to the Surgeon General, the mortality due to battle wounds was reduced 600 per cent in the 30 years between World War I and World War II. These statistics, translated in terms of industrial health, would indicate that the industrial worker can expect a similar benefit as to morbidity and mortality. Comparable advancements have been made in most fields of medical care, as may be illustrated in the normal course of pneumonia today as contrasted with the stormy six or eight weeks illness of a few years ago.

In talking with your patients about socialized medicine you can draw many other illustrations from your own private practice. You will find that there are arguments based on facts to support the stand we have taken in an effort to preserve the American way of life. The effectiveness of these arguments depends upon the way in which you present them to your patients. You have a definite responsibility to your patients and your community—Haddon Peck, M. D., in J. Kansas Med. Soc.

GENERAL NEWS

COUNCIL CLEARS HEAVY CALENDAR IN FALL SESSION AT PARKERSBURG

The regular fall meeting of the Council of the West Virginia State Medical Association was held at the Chancellor Hotel in Parkersburg, Sunday, October 2, 1949, at noon.

At the beginning of the meeting, Doctor Bess, the chairman, asked all present to stand for a minute in memory of the late Russell B. Bailey, M. D., of Wheeling, a member of the Council from the first district, and president elect of the State Medical Association.

VA Fee Schedule Amended

The executive secretary reported that the Veterans Board of Review had unanimously approved an amendment to the note appearing on page 26 of the VA Fee Schedule, under the heading "Occupational Therapy and Physiotherapy." The Veterans Administration had previously requested that the note be amended by deleting the last sentence in the paragraph.

The recommendation of the Board was accepted by the Council and the president was authorized to approve formally the amendment submitted by the veterans administration. As amended, the note at the top of page 26 reads as follows:

"Physical therapy and occupational therapy are understood to be treatment rendered by physicians practicing in the field of physical medicine or by physical therapists or occupational therapists who render such treatment on a prescription basis under the direction of physicians."

Secretaries' Conference

It was ordered that the annual Secretaries' Conference be held at Charleston during the month of January, 1950. This will be the third conference sponsored by the State Medical Association since the end of World War II. The exact date of the conference will be fixed later on this fall.

Convention Registration Fee

The Council unanimously directed that a registration fee of $10.00 be collected again from all members who attend the annual meeting at The Greenbrier, White Sulphur Springs, July 27-29, 1950. The proceeds will be used to offset partly the loss of revenue usually accruing from commercial exhibits at annual meetings.

The Council also voted unanimously in favor of a motion to recommend to the House of Delegates that an assessment of $5.00 be levied in 1951 against each member of the State Medical Association to help defray convention expenses, it being understood that no registration fee would be collected in connection with the 1951 meeting.

It was further ordered that in the event the House of Delegates approves the recommendation, the special assessment of $5.00 is to be collected from each member with the annual state dues of $15.00 and remitted by component society secretaries with such dues to the headquarters offices of the State Medical Association.

Medical Examination Fees

The executive secretary reported that replies had been received from several insurance companies with reference to the matter of a possible increase in fees for medical examinations, and that a full report would be submitted at a future meeting of the Council.

Dr. W. M. Sheppe Renamed

Dr. William M. Sheppe, of Wheeling, was reelected a member of the publication committee for the term expiring December 31, 1954.

Nomination for AMA Associate Fellowship

Dr. Charles Trueheart Taylor, of Huntington, an honorary member of the West Virginia State Medical Association, was nominated for associate fellowship in the American Medical Association.

New Duties for PR Committee

The Council considered at length the matter of continuing the existence of the special committee on rural health in light of the fact that the public relations committee has undertaken the formulation of a definite program for extension of medical care and hospital or clinical facilities in rural areas.

It was explained that two rural conferences sponsored by the public relations committee had been held at Jackson's Mill, and that the committee would sponsor another such meeting there within the next few weeks in cooperation with representatives of various rural groups. It was further reported to the Council that the state PR committee and rural groups had agreed to sponsor a statewide rural health conference at Jackson's Mill in the spring of 1950.

The Council voted unanimously to abolish the special committee on rural health effective January 1, 1950, with the understanding that the duties of that committee are to be assumed by the PR committee.

Clarification of By-Laws

Dr. Thomas G. Reed, the president, reported that, in order to decide any question that might have arisen or that might hereafter arise concerning the eligibility of the first vice president elect to succeed to the presidency in the event of the death, resignation or removal of the president elect, he had submitted the matter to the Association's attorney, Mr. H. L. Snyder, of Charleston, for a formal opinion. He reported that this had been done with the full knowledge and consent of Dr. C. E. Watkins, of Oak Hill, first vice president elect.

Doctor Reed reported that Mr. Snyder had submitted a written opinion to him under date of October 1, 1949, and, at the request of Doctor Reed, the letter from Mr. Snyder was read by the executive secretary.

It was ordered unanimously that the written opinion of Mr. Snyder be accepted by the Council and spread upon the minutes of this meeting. The letter follows:

MOHLER, PETERS & SNYDER
Attorneys At Law
Charleston, West Virginia

October 1, 1949

Dr. Thomas G. Reed, President
West Virginia State Medical Association
Charleston, West Virginia
My dear Doctor Reed:

You have requested my opinion on the matter of the succession to the presidency of the West Virginia State Medical Association.

Dr. Russell B. Bailey was elected president of the Association at the annual meeting on August 5, 1949. At the same meeting Dr. Charles E. Watkins was elected First vice president and Dr. Jacob C. Huffman was elected Second vice president. Dr. Bailey's term of office would have begun January 1, 1950, but he died September 15, 1949.

Upon examination of your Constitution and By-Laws I find that there is no oath of office required and apparently the officers assume their duties without any action following their election.

The By-Laws of the Association, as last revised July 1, 1945, contain the following provisions relative to succession of officers. I quote from Chapter VI, Section 2:

> "The Vice Presidents shall assist the president in the discharge of his duties. In the event of the death, resignation or removal of the President, the First Vice President shall succeed him in the event of his incapacity the First Vice President shall act in his stead."

Obviously the last sentence of the quoted section is not clear. Your executive secretary, Mr. Charles Lively, has furnished me with a copy of the Constitution and By-Laws as printed in the year 1937, and I find that the word "and" appears in the quoted section between the words "him" and "in." Mr. Lively has also told me that when this section was amended in 1944 it was the intention of the Association to provide that the Second vice president should succeed in the event of the incapacity of the First vice president.

Your Constitution and By-Laws are silent on the question of succession in the event of the death of a President elect. However Chapter VI, Section 1, provides as follows:

> "The President shall . . . be the real head of the profession of the State during his term of office . . ."

The provision that the President shall be the "real head of the profession" has led me to the conclusion that the First vice president, Dr. Charles E. Watkins, should assume the presidency of the Association on January 1, 1950. When the Association at its annual meeting, elected him as the First vice president, it will be presumed to have anticipated that in any event he would succeed the president. There being no provision in your Constitution and By-Laws for the election of a president by any body other than the House of Delegates, the election on August 5, 1949 must be considered as a final action of the Association with respect to the position of the "real head of the profession of the state" for the term beginning January 1, 1950.

I find no provision in the West Virginia Code which provides for the succession of corporate officers in a situation such as the Association, as a corporation, now finds itself. However, there is a principle of equity that I believe controls the question of succession. I do not know when the provision that the President "shall be the real head of the profession of the state" was written but these incisive words undoubtedly indicate that the presidency is a position of trust. A trust cannot fail for want of a trustee. The very nature of the appointment or election of a Trustee impels any court to consider the substitution of a successive trustee under all the circumstances of the case.

Although your Constitution and By-Laws are not entirely clear as to the succession to the presidency in the circumstances, it is my opinion that Dr. Charles E. Watkins should be "the real head of the profession of the state" with all the powers and duties of the President beginning January 1, 1950. He should be addressed as president and not as acting president or first vice president. Dr. Jacob C. Huffman should act as First vice president beginning January 1, 1950, and should be addressed as such. Beginning January 1, 1950, the office of second vice president is vacant.

Very truly yours,

HLS:vwu H. L. SNYDER

The following members of the Council were present at the meeting:

Dr. Thomas Bess, chairman; Dr. Thomas G. Reed, president; Dr. J. C. Huffman, second vice president; Dr. T. M. Barber, treasurer; Drs. J. P. McMullen, Wellsburg; L. Rush Lambert, Fairmont; Fred R. Whittlesey, Morgantown; George F. Evans, Clarksburg; A. R. Sidell, Williamstown; E. L. Gage, Bluefield; D. C. Ashton, Beckley; and Russel Kessel, Charleston; and Mr. Charles Lively, secretary ex officio.

DR. McMULLEN NAMED COUNCILLOR

Dr. James P. McMullen, of Wellsburg, has been named a member of the Council of the West Virginia State Medical Association to fill the unexpired term of the late Russell B. Bailey, M.D., of Wheeling. The appointment was made by Dr. Thomas G. Reed, president of the Association.

Doctor McMullen will on January 1, 1950 begin a two-year term as member of the Council from the first district, having been elected at the annual meeting at White Sulphur Springs last August.

MLB SCHEDULES WINTER MEETING

The winter meeting of the Medical Licensing Board will be held at The Capitol, in Charleston, January 3-5, 1950, for the purpose of examining applicants for license to practice medicine in West Virginia.

At the meeting of the Board held in Charleston October 3-5, the examination for licensure in West Virginia was given to 35 applicants, 15 by direct examination, and 20 by reciprocity with other states.

DR. C. B. WRIGHT HEADS CANCER SOCIETY

Dr. Chauncey B. Wright, of Huntington, vice chairman of the board of directors of the West Virginia Cancer Society, succeeds the late Russell B. Bailey, M.D., of Wheeling, as chairman of the board, and as president of the Society.

Doctor Wright has served for several years as an officer of the Society, and as a member of the cancer committee of the West Virginia State Medical Association.

DR. ROBT. J. REED, JR., TWICE HONORED

Dr. Robert J. Reed, Jr., of Wheeling, has been named by Governor Okey L. Patteson as a member of the state board of health to succeed the late Russell B. Bailey, M.D., of that city, who died September 15, 1949. His term of office will expire June 30, 1956.

Doctor Reed's specialty is surgery, and he has been engaged in active practice at Wheeling since 1924. He has served as president of the Ohio County Medical Society, president of the West Virginia State Medical Association, and member and chairman of the Council.

RURAL CONFERENCE ADVOCATES FOUR-POINT HEALTH PROGRAM

The second of a series of rural health conferences sponsored by the Public Relations committee of the West Virginia State Medical Association was held at Jackson's Mill, September 22, with Dr. Frank J. Holroyd, of Princeton, presiding as chairman.

The group went on record unanimously as favoring the following four-point program for the improvement of health conditions in the rural areas of West Virginia:

1. Establishment of a four-year school of medicine and dentistry in West Virginia.
2. Award of five scholarships for medical school students with the proviso that they practice for five years in a rural community in the state.
3. Establishment of a health council in each of the 55 counties, as well as in municipalities and communities where a need for same is shown.
4. Immediate survey of medical health needs in one or two selected counties for the purpose of determining what services are needed in rural areas generally.

The program as outlined at the meeting at Jackson's Mill received the unanimous endorsement the following day of delegates attending the annual southern district meeting of the West Virginia Public Health Association at Bluefield.

The matter of the creation of a four-year school of medicine and dentistry was referred to a special interim committee by the legislature at the regular session which adjourned in March, 1949, and Dr. Herman G. Weiskotten, dean of Syracuse University College of Medicine and chairman of the AMA Council on Medical Education and Hospitals, has agreed to undertake an independent survey for this committee. Dr. Alan A. Gregg, director of medical science for the Rockefeller Foundation, has also been invited to make a separate survey for the committee.

Scholarships, which would be provided by the state, would be awarded upon the basis of merit and with the distinct understanding that, upon the completion of his medical education and a year's internship, the student would locate for practice for the period of five years in an area designated by representatives of farm groups, the School of Medicine of West Virginia University, and the West Virginia State Medical Association.

A few county health councils have already been set up by the state health department in this state, and every effort is being made at the present time to have additional councils organized as soon as possible.

The survey of health conditions and the need for medical care in rural areas will be under the direct supervision of Miss Gertrude Humphrey, of Morgantown, state leader of Home Demonstration Work, West Virginia University. In this survey, Miss Humphrey will enlist the services of various farm groups in one or two counties with the idea of completing the work without delay so that all of the members of the groups represented at the meeting may have a better idea of the needs in rural areas so far as health facilities and medical service are concerned.

In addition to another meeting of the group which will be held just as soon as possible, a statewide rural health conference is planned for the spring of 1950, and representatives of interested organizations from every county in the state will be invited to attend.

PR CONFERENCE IN CHICAGO

The second annual Medical Public Relations Conference sponsored by the American Medical Association will be held in Chicago, November 5-6, 1949. Sessions will be held at the Bismark Hotel and at AMA headquarters.

Prominent speakers in the field of medical public relations will take part in the program, which will begin at 9:30 o'clock Saturday morning, November 5 and end after a luncheon on Sunday.

The conference will follow the annual Secretaries-Editors meeting, which is scheduled for Chicago, November 3-4.

CHARLESTON DOCTOR ACCEPTS PROFESSORSHIP

Dr. Adolph G. Kammer, general medical director of Carbide and Carbon Chemicals Corporation, with offices located at South Charleston, has accepted appointment as professor and head of the Department of Occupational Health at the University of Pittsburgh Graduate School of Public Health. The appointment, which was announced by Dr. Thomas Parran, is effective October 1.

Doctor Kammer came to South Charleston in 1947 from Oak Ridge, Tennessee, where he had served as medical director of Carbide and Carbon Chemicals Corporation in that city. Previously he had served as medical director of the Inland Steel Company at East Chicago, Indiana.

Doctor Kammer will continue his work with Carbide and Carbon Chemicals Corporation upon a part-time basis.

DR. WATKINS RENAMES PROGRAM COMMITTEE

The first official act of Dr. Charles E. Watkins, who, as first vice president elect of the West Virginia State Medical Association, will succeed to the presidency on January 1, 1950, was to rename the three members of the scientific work committee appointed by Dr. Russell B. Bailey, the president elect, a short time before his death on September 15.

The committee, composed of Dr. J. P. McMullen, of Wellsburg, chairman, and Drs. E. J. Van Liere, of Morgantown, and Richard E. Flood, of Hollidays Cove, is in session at Parkersburg as this issue of The Journal is on the press (October 30). It is expected that the type of program to be arranged for the 83rd annual meeting at White Sulphur Springs, July 27-29, 1950, will be decided upon at this meeting.

DR. J. L. PATTERSON, OF LOGAN, HEADS ACADEMY OF GENERAL PRACTICE

Dr. J. L. Patterson, of Logan, was elected president of the West Virginia Academy of General Practice at the First Annual Scientific Assembly held October 9, 1949, at Charleston. He succeeds Dr. Tyler R. Boling, of Grantsville. Other officers were elected as follows:

Vice president, Dr. Donald R. Roberts, Elkins; delegates to the national convention, AAGP, Drs. James W. Repass, Lumberport, and William P. Bradford, Moundsville; and, alternates, Drs. Thomas H. H. Blake, St. Albans, and Halvard Wanger, Shepherdstown.

Dr. Carl B. Hall, of Charleston, was reelected secretary-treasurer. Dr. Jacob C. Huffman, of Buckhannon, was elected a member of the board of directors for the term expiring in 1952.

The meeting, which was attended by over 60 general practitioners from over the state, was held at the Ruffner Hotel, and the following interesting program was presented:

J. Harold Kotte, M. D., Cincinnati, Ohio—"Pathogenesis and Treatment of Congestive Heart Failure."

W. A. Thornhill, Jr., M. D., Charleston—"Coronary Heart Disease."

William C. Stewart, M. D., Charleston—"Congenital Heart Disease."

Alexander Marble, M. D., Boston, Massachusetts—"Diabetes Mellitus."

George P. Heffner, M. D., Charleston—"Practical Aspects of Diet and Insulin Usage in Diabetes Mellitus."

Willard Pushkin, M. D., Charleston—"Practical Considerations in Management of Diabetes Mellitus."

Dr. Ellsworth R. Johnson, Chiropodist, Charleston—"Foot Care."

RELOCATIONS

Dr. C. F. Jackson, of War, has moved to Bradshaw, where he will continue in industrial practice.

* * * *

Dr. Emil Gribovsky, who is on leave of absence from the VA regional office at Huntington, is taking a postgraduate course in internal medicine at Cornell University, in New York City.

* * * *

Dr. J. Marshall Carter, of Lake Charles, Louisiana, has located at Huntington for the practice of his speciality of orthopedic surgery. He has offices at 303 Guaranty Bank building. Before moving to Louisiana, Doctor Carter was located at Williamson.

* * * *

Dr. Don V. Hatton, of Huntington, has moved to Louisville, Kentucky, where he has accepted appointment as internist and cardiologist at the VA regional office in that city. He was formerly a member of the medical staff at the VA regional office at Huntington.

DR. WILLIAM L. COOKE AGAIN HEADS W. VA. TB AND HEALTH ASSOCIATION

All of the present officers of the West Virginia Tuberculosis and Health Association were reelected at a meeting of the board of directors held in connection with the annual meeting of the Association at Clarksburg, September 28-29, 1949.

Dr. William L. Cook, of Charleston, is the president, and other officers are as follows: Vice president, Mr. W. A. Smith, Parkersburg; secretary, Dr. J. L. Patterson, Logan; and treasurer, Mr. Robert C. Hawkins, Charleston.

The executive committee will be composed of the officers of the Association and the following members who were elected at the meeting at Clarksburg: Dr. George F. Evans, Clarksburg; Mrs. W. H. Level, Oak Hill; Dr. Karl J. Myers, Philippi; Dr. Leo H. Mynes, Charleston; and, Mrs. Elizabeth Schmidt, Wheeling.

Dr. John H. Skavlem, of Cincinnati, associate professor of medicine at the University of Cincinnati College of Medicine, and vice president of the National Tuberculosis Association, was the guest speaker at the banquet on September 28. His subject was, "How We Are Protected Against Tuberculosis by Nature and the Physician."

The speaker stated that tuberculosis is not inherited, but that the ability to resist the disease is inherited. This resistance, inherited or acquired, is not constant, but may vary due to fatigue, malnutrition, and the effects of diseases, especially respiratory infections.

The speaker said that in recent years more people of middle age beyond 40 are developing tuberculosis, and that this point must be given consideration in plans to control the disease.

"BCG," he said, "offers considerable help in the prevention of the development of the disease in individuals. It must be used under very well controlled conditions and, at present, is applied only to those groups of persons who are heavily exposed to the infection, such as nurses, doctors, and infants in homes where there is active tuberculosis. Use of BCG will undoubtedly be extended."

Doctor Skavlem said that streptomycin is the best therapeutic agent yet developed for use in the fight to control tuberculosis. He said that its plausible use is in acute cases where the patient is so ill that collapse measures of treatment cannot be applied.

"Streptomycin," he said, "does not and cannot replace the other methods of treatment such as rest, hospital care, pneumothorax or surgery." He stressed the fact that the need for sanitariums and hospitals for the treatment of tuberculosis is greater than ever before. "Such hospitals," he said, "must now be more completely equipped with special laboratories and surgical facilities, and therefore, the need for money to build and maintain tuberculosis hospitals is greater than ever."

STATE HYGIENIC LABORATORY ORDERS QUANTITATIVE TESTS FOR SYPHILIS

The syphilis serological routine on blood specimens in the state hygienic laboratory has been revised to include quantitative testing on all specimens which show any degree of positivity. This revision followed the recommendation by the syphilis advisory committee of the West Virginia State Medical Association for increased use of quantitative serological tests for syphilis throughout all the serological laboratories in West Virginia.

According to Dr. N. H. Dyer, state director of health, the advantage of the quantitative test is that it shows not just a positive or negative result but, if positive, how strongly positive the patient's blood may be. In following a patient's case during and after treatment the qualitative test often shows one positive result after another with no sign of improvement. The quantitative test however, while it may remain positive for a long time, should show a drop in titre following adequate treatment.

The revision will still include that part of the previous procedure for blood specimens which utilized an especially sensitive Mazzini test as a "screen" to rule out obvious negatives. Any serum reacting as positive or doubtful by this especially sensitive Mazzini will be checked by a second test, the Kahn quantitative test. Thus all reports other than negative will be expressed as the highest dilution of patient's serum at which a positive reaction is observed.

It is estimated that this change will require quantitative work on about 250-300 blood specimens per day, an increase of about 100 to 200 quantitative tests over those previously carried out per day. In order to accomplish this, it will be necessary to omit all other serological tests (such as the Hinton and the Kolmer) on "routine" blood specimens. These additional tests therefore will not be available routinely, but will be retained for special studies only.

The examination of spinal fluid will not be influenced by this change since all spinal fluids have been tested quantitatively for years at the state hygienic laboratory.

FRACTURE MEETING IN PITTSBURGH

A fracture meeting of the Regional Fracture Committee of the American College of Surgeons of western Philadelphia will be held November 16, at the University Club in Pittsburgh.

A conference on fracture problems is scheduled for 2:00 P.M., to be followed at five o'clock by a social hour. Dinner will be served at the University club at 6:30 P.M., with Dr. Harold A. Sofield, of Chicago, as the guest speaker. His subject will be, "Medullary Nailing of Fractures."

An invitation has been extended to all members of the medical profession to attend the meeting.

SOUTHERN MEDICAL MEETS NOV. 14-17

The West Virginia State Medical Association will be well represented at the 43rd annual meeting of the Southern Medical Association, which will be held at the Netherland Plaza Hotel, in Cincinnati, November 14-17, with the Campbell-Kenton County (Kentucky) Medical Society as the host Society.

While general headquarters will be maintained at the Netherland Plaza, meetings of some sections and groups will be held at the Gibson and Sinton Hotels. All general sessions will be held at the Netherland Plaza, and scientific and technical exhibits will be set up there.

General clinical sessions will be held Monday afternoon, November 14, and meetings of sections are scheduled for Tuesday, Wednesday, and Thursday.

Dr. Oscar B. Hunter, of Washington, D. C., is president of the Association, and Dr. Hamilton W. McKay, of Charlotte, North Carolina, president elect.

Dr. Andrew E. Amick, of Lewisburg, is a member of the Council which will meet during the session, and Dr. J. J. Brandabur, Huntington, is secretary of the section on industrial medicine and surgery.

Mrs. U. G. McClure, of Charleston, is second vice president of the Woman's Auxiliary to the Southern Medical Association, and will attend the sessions at Cincinnati.

While the hotels in Cincinnati are pretty well filled at the present time, rooms are still available, but reservations must be made through the Hotel Committee. Inquiries should be addressed to the Committee at 910 Dixie Terminal Building, Cincinnati 2, Ohio.

CONGRESS ON INDUSTRIAL HEALTH

The Tenth Annual Congress on Industrial Health, sponsored by the Council on Industrial Health of the American Medical Association, will be held February 20-21, 1950, at the Roosevelt Hotel in New York City.

VITAL STATISTICS

Births reported to the state department of health for the first seven months of 1949 show an increase over the corresponding period last year, 32,498 births being reported for this year as against 31,756 last year.

The number of deaths this year, 11,190, shows a decrease from the 11,365 reported for the same period in 1948. The vital index of 290 births for 100 deaths for 1949 maintains the favorable relationship between births and deaths reached during the war years, when the number of births showed an all-time high.

The number of deaths from diarrhea and enteritis totaled 61 during the month of August. For the first seven months of this year there were but 57 deaths from this cause reported, including 24 in July. The January-August total for 1949 is 118, an increase of 63.8 per cent over the same period last year. The 1948 July and August deaths from diarrhea and enteritis were 12 each.

AMA PLANNING 3rd ANNUAL INTERIM SESSION

Advance registrations and hotel reservations are being received for the third annual mid-year Clinical Session of the American Medical Association, which will be held in Washington, December 6-9. Advance registration on the part of the doctors who expect to attend the meeting will eliminate the usual long wait at the registration desks at the National Guard Armory upon their arrival.

Applications for rooms should be mailed before November 9 to the Subcommittee on Hotels, American Medical Association, Hotel Reservation Bureau, Star Building, Washington 4, D. C.

The Clinical Session will provide a full-scale scientific program specially designed for the general practitioner. Speakers will discuss such subjects as diabetes, pediatrics, laboratory diagnosis, physical medicine and rehabilitation, arthritis, dermatology, x-ray diagnosis, cancer, poliomyelitis and other topics.

Typical of the complete coverage which will be given medicine in the fields in which the general practitioner is interested is the program covering pediatrics. In sessions beginning on the afternoon of December 6 and continuing through the morning of December 9, approximately 35 papers will be presented by leading specialists from all parts of the country.

In another section, about the same number of papers will deal with the problems of delivery alone. More than 20 physicians will present their findings and views on diabetes.

One of the features of the section dealing with arthritis will be a report on the present status of cortisone and ACTH, two compounds which have opened new approaches to the treatment of rheumatoid arthritis.

The clinical sessions will be held in the National Guard Armory and exhibits will also be set up there. All meetings of the House of Delegates will be held at the Hotel Statler.

MENTAL HYGIENE PROGRAM EXPANDS

A diagnostic service for detecting emotional and behavior problems has been inaugurated in Fayette County by the bureau of mental hygiene in cooperation with the bureau of public health nursing of the state department of health.

A psychiatrist, psychologist and social worker attached to the mental hygiene bureau at Charleston will visit the Fayette Clinic, in Fayetteville, two days each month for the purpose of reviewing cases screened by the professional personnel of the local unit. Recommendations for the proper disposition of cases will be made at that time. Cases needing intensive treatment will be referred to one of the four existing mental clinics in the state.

The Wood county clinic, another recent addition to the mental hygiene program in West Virginia, was opened in August. A group of civic-minded persons in Parkersburg stimulated interest in a free child guidance clinic there which will be sponsored locally for the first two years. Organizational consultant service was given the group by members of the bureau of mental hygiene.

The clinic, which is located in Parkersburg, operates for a full day on the first and third Friday of each month. The staff consists of a psychiatric social worker, a physician, a psychologist and the necessary helpers for case histories. Physical examinations are made by the local health officer.

Through the efforts of the state department of health, mental hygiene facilities are now being offered to persons in five areas scattered throughout the state with clinics located in Charleston and Institute, Kanawha County; Martinsburg, Berkeley County; Huntington, Cabell County; Parkersburg, Wood County; and Fayetteville, Fayette County.

During the fiscal year, 1948-1949, 399 new cases were seen in the existing clinics. Over 150 cases were carried over from the previous year. Of the total, 273 cases were withdrawn or temporarily closed and 282 remained active.

SECRETARIES-EDITORS CONFERENCE

The annual conference of State Medical Association Secretaries and Editors will be held at the AMA building, in Chicago, November 3-4. The program has been arranged by a committee of which Dr. Douglas W. Macomber, of Denver, is the chairman.

Two West Virginia doctors will have a prominent part in this meeting. Dr. Frank J. Holroyd, of Princeton, chairman of the state PR committee and area chairman of the National Conference of County Medical Society Officers, will appear on the program Thursday morning, November 3, and Dr. Walter E. Vest, of Huntington, editor of the West Virginia Medical Journal, is scheduled for an address at the dinner meeting that evening.

CARE'S NEW BOOK PROGRAM

The new program, sponsored by CARE, for replenishing the war-ravaged libraries of Europe and the Far East with English language books, will get under way in November.

The dire need for books, especially technological, by universities and libraries which have been cut off from the rest of the world since the start of the war, or which suffered extensive destruction of their books, has been outlined by Dr. Luther Evans, Librarian of Congress.

Under the CARE plan, in which the United Nations Educational, Scientific and Cultured Organization is cooperating, a preliminary list of 1,200 titles has been selected by a committee as meeting the immediate general need by libraries abroad. These embrace a variety of categories, but most of them are of a technical or semi-technical nature.

From funds raised by private donations, CARE plans to buy from participating publishers the listed books at their regular retail price, but at a discount which will meet the full cost to CARE of wrapping, shipping and delivery overseas.

All books will be purchased new and no provision is being made for accepting gifts of books, chiefly because of the lack of distribution organization to handle book donations.

But individual donors of more than $10 may designate with their money gift to CARE from which category they desire to have books chosen for shipment. In the case of donations of more than $10 the donor may name the institution, and books will bear bookplates with the donor's name.

The following categories have been selected for the first list of 1,200 books under the committee headed by Dr. Evans, with the cooperation of Unesco, the American Library Association and the United States Book Exchange: Health and welfare; medicine; dentistry; applied science; nursing; agricultural science; veterinary science; and English language instruction.

Donations may be made in any amount. Those under $10 are pooled in a non-profit fund. Donations of $10 or more may specify the institution and category. These should be sent to CARE Book Program, 20 Broad Street, New York 5, New York.

NEW DIRECTOR FOR CANCER CENTER

Mrs. Frances G. Meyer, director of the Charleston Cancer Information Center since its creation in August 1945, has resigned and moved with her husband to New York City, where he will continue as an executive officer of General Motors.

Miss Veda A. Jenkins, formerly connected with the department of public assistance, succeeds Mrs. Meyer as director of the Cancer Center in Charleston.

CONFERENCE ON CARDIOVASCULAR DISEASES

A National Conference on Cardiovascular diseases, sponsored by the American Heart Association and the National Heart Institute of the USPHS, will be held at Washington, D. C., January 18-20, 1950. This will be the first national conference of physicians, scientists, community service leaders, and members of allied professions ever held for the purpose of formulating a comprehensive program to combat the nation's leading cause of death.

Dr. H. M. Marvin, president of the American Heart Association, and Dr. C. J. Van Slyke, director of the National Heart Institute, will serve as co-chairmen of the conference.

It is expected that plans will be developed at the conference to determine how professional and lay groups concerned with diseases of the heart can best work together for the most effective use of the resources for the entire community.

In addition to doctors, representatives from the fields of nursing, social work, hospital administration, rehabilitation, public health and others concerned with the various aspects of the heart disease control program will attend the meeting.

PHYSICIAN WANTED

Physician for 50-bed hospital located in southern West Virginia wanted immediately. Salary $500 per month and full maintenance, with opportunity for increase after six months. Prefer young man interested chiefly in medicine or traumatic surgery, but work not limited entirely to these fields.—Box JF, Care West Virginia Medical Journal, Box 1031, Charleston 24, W. Va.

COUNTY SOCIETIES

CABELL

Dr. Hugh J. Jewett, Associate Professor of Urology, Johns Hopkins University, Baltimore, was guest speaker at the regular monthly meeting of the Cabell County Medical Society held September 8, at the Hotel Prichard, in Huntington. His subject was, "Carcinoma of the Bladder and Prostate." His very fine paper was illustrated with numerous lantern slides. Dr. C. A. Hoffman opened the discussion, in which several members of the Society participated.

At the business meeting which followed the scientific program, Dr. Sidney Schnitt, of Huntington, was elected a member of the Society.—Thomas B. Baer, Secretary.

* * * *

FORT HENRY ACADEMY

The first meeting of the Fort Henry Academy of Medicine for the season of 1949-50 was held September 27 at the Wheeling Hospital School of Nursing Auditorium, with Dr. Eugene A. Stead, professor of medicine at Duke University, as the guest speaker. More than 100 persons were present.

Doctor Stead presented a paper on the "Dietary Treatment of Cardiac Failure and Hypertension." The paper was discussed by Dr. H. R. Sauder and Dr. F. J. Gaydosh.—Robert M. Sonneborn, M. D., Secretary.

* * * *

MARION

Dr. Jerome Styrt, of Johns Hopkins University School of Medicine, was the guest speaker at the regular monthly meeting of the Marion County Medical Society, held September 27, at the Fairmont Hotel, in Fairmont.

The speaker discussed very interestingly medical conditions in England today. His impressions were based upon a year's residence in that country. He expressed the opinion that the National Health Service plan will probably work out all right in England but that it will not solve medical problems in America.

A resolution was adopted concerning the omission of the names of certain members of the Marion County Medical Society from the list of doctors approved for participation in the UMW Welfare and Retirement Fund program, and directing that additions to or deletions from such a list be made only with the approval of the Society.

Under the resolution, a liaison committee composed of the officers of the society were appointed to handle problems concerning doctors in their relations with the Welfare and Retirement Fund.

Dr. William E. Ehrgott was elected to membership by transfer from the Berk's County (Pa.) Medical Society, and Dr. Rupert W. Powell by transfer from the Richmond (Va.) Academy of Medicine.—George T. Evans, M. D. Secretary.

THE WEST VIRGINIA MEDICAL JOURNAL

302 ATLAS BUILDING, CHARLESTON, W. VA.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Editor
WALTER E. VEST, M. D.
955 Fourth Ave.
Huntington, W. Va.

Managing Editor and
Business Manager
MR. CHARLES LIVELY
Box 1031
Charleston 24, W. Va.

Associate Editors:
EDWARD J. VAN LIERE, M. D.
Morgantown, W. Va.
W. M. SHEPPE, M. D.
Wheeling, W. Va.
G. G. IRWIN, M. D.
Charleston, W. Va.
R. H. EDWARDS, M. D.
Welch, W. Va.

JAMES R. BLOSS, M. D., Editor Emeritus, Huntington

Vol. XLV DECEMBER, 1949 No. 12

SECRETORY OTITIS MEDIA

By SOBISCA S. HALL, M. D.,
Clarksburg, W. Va.

I could open this subject with no better statement than that of Dr. Harold G. Tobey[1] who states, "the increased incidence of secretory otitis media in the last few years has lead to a renewed interest in the etiology, diagnosis and treatment of this disease. The diagnosis which, it would seem, should be simple and self-evident, is frequently difficult and often escapes the attention of the examiner."

The etiology of this condition apparently is as follows: It is a disease largely of adult life and restricted to the seasons of the year in which colds occur frequently. It is about equally divided among the sexes.

The pathology is not too well known. There are a few things that are characteristic. There seems to be partial anesthesia of the drum membrane suggesting that it may be a neurogenic lesion. The secretions may vary in character from a clear, watery material to a thick, tenacious, gummy, mucoid type. The source of the secretion is from the middle ear. The causes of the secretions are not too well known. We do not know but that they may be infection precursors or residuals.

The symptoms are variable, dependent upon the state of the disease and the character of the secretions. The patient frequently will state that he has an ear "stopped up" or "it sounds like I have my hand over my ear" or "it sounds as though I had my head in a barrel." He will state that he hears cracking and snapping in the ear and occasionally he will have improvement in hearing as he tilts his head forward only to have the deafness recur as the fluid again levels off.

The signs are not always easily interpreted. The drummembrane may be a dry, thickened one, nonrevealing for middle ear pathology. Frequently the drum is retracted with the middle ear full of fluid. It may have a subicteric reflex or may be dull pink in color. It is not hypervascular nor is there any injection of the annulus or malleus, and there are no discernible fundus changes. If the drummembrane is thin and the secretions are highly fluid, bubbles or a fluid level are frequently seen. The deafness is of a conduction character.

On myringotomy which usually can be done without anesthesia fluid presents through the incision, and may be liquid, and may flow readily or may present itself as a bead which will require suction evacuation for freeing the middle ear. Frequently it is tough, gummy and extremely cohesive.

If untreated, what are the results? Doubtless some cases resolve themselves and the ear returns to normal, but we must remember that this may be the beginning of a permanent adhesive process. We know that many of our cases have persisted for as long as four months, yet have cleared promptly after adequate myringotomy and evacuation of the middle ear. X-rays on two of the patients who had rather persistent

*Presented before the West Virginia Academy of Ophthalmology and Otolaryngology at the Second Annual Meeting at Martinsburg, May 19, 1949.

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PH

symptoms showed that the mastoid had been involved in a simular process. Fortunately, neither case required surgery.

What is the proper form of treatment? We have found that myringotomy, complete evacuation of the secretions from the middle ear, frosting the fundus with sulfanilamide microcrystals and restricting the patient absolutely to no use of drops or irrigations have resulted in a healed drum, a return of normal hearing and, in brief, a normal ear.

Improper treatment is not only unfair to the patient but dangerous to the function of the organ. We should not practice a system of *laissez-faire*. If this is done, a few cases doubtless will clear but many will persist, with permanent damage to the ear. Inflation alone has not been adequate in our practice. Chemotherapy or antibiotics are not indicated. The use of hot or cold applications does not seem to alter the course. Ear drops to influence so-called osmosis are useless.

What is the course of the disease with proper treatment? Autophony clears markedly at the first treatment and is completely gone in two or three days. The tinnitus is reduced and disappears in a short time. The deafness is frequently completely relieved on expulsion of fluid. The middle ear may drain a thin serum for a few days after myringotomy but in many instances there is no drainage except at the actual time of myringotomy and expulsion. The drum has healed in every instance in our practice, and the site of healing is not easily identified. We have had what we believe to be a return to normal ear function in all of our cases.

In the study of our series of 90 cases, some interesting questions occurred to us. Did we fail to recognize the prevalence of this lesion prior to 1941? This is possible but I am certain that if the condition was present in my practice then to the extent that it is now, it would have been recognized. Hoople[2], in 1941, stated, "we are reluctant to admit that the disease had been prevalent in the years prior to 1941 and that our eyes are now seeing pathology which we had previously failed to see."

Politzer[3], even in his time, stated, "exudation into the tympanic cavity is more frequently caused by inflammatory process of the mucous membrane itself; it is beyond doubt that sometime an excess swelling of the tubal membrane and impermeability of the eustachian tube occurs and in consequence of the consecutive rarefaction of air in the tympanum a transudation of serous fluid takes place which is free of bacteria."

It is known that there are cycles of virulence and avirulence of certain organisms, and this in itself may be responsible for the present prevalence of this condition but it is my conviction that the wide use of chemotherapy and antibiotics is the most likely reason for the condition.

CASE REPORTS

Case 1.—Mrs. R.A.B., age 23, was seen on 12-14-48 with a history of bilateral deafness which came on following a cold. With this she had marked tinnitus of roaring character, with autophony. Examination revealed both drums retracted, drum luster altered, and the middle ear filled with fluid. Bilateral myringotomy was performed and a few drops of thick, gummy, secretions expelled with immediate marked improvement in hearing. On 2-22-48 the ears were quiet, the drums healed. She stated that the ear condition was entirely clear.

Case 2.—Mrs. S.E.S., age 44, was seen on 8-10-48 with a history that the right ear had been stopped up for six weeks without pain or tinnitus but with marked deafness. She stated it was much better when she was lying down. She had had four treatments consisting of tubal inflation, with only slight temporary relief. Examination showed the drum membrane thickened, luster diminshed, and questionable fluid in the middle ear. Myringotomy was done and several drops of thick, amber colored fluid were expelled, with almost immediate relief of symtoms. On 8-13-49 the patient was seen and stated that she had had no further difficulty. She was discharged from treatment on 8-27-48, with the drum healed and complete relief of symptoms.

Case 3.—Mr. C.R.S., age 61, was seen on 3-30-41 with a history of having had influenza two weeks previously at which time he had consulted an ear, nose and throat man who had inflated the eustachian tubes, without relief. When seen by us he complained of deafness, autophony and severe roaring tinnitus. Examination showed marked thickening of the drum membranes with reduction in luster but no positive evidence of fluid in the middle ears. Both tubes inflated easily but with Toynebee's phoendoscope "cracking" was heard in both ears. Bilateral myringotomy was done and six to eight drops of thick, amber colored fluid expelled which were obtained from the middle ear only by forceful suction. He obtained marked improvement in hearing at once. He was seen again on 4-11-41 with both drums healed and the symptoms entirely gone.

Case 4.—Mr. R.W.P., age 23, was seen on 3-14-49 with a history of severe cold in the last month and the left ear blocked since onset of cold. He noticed that when he tipped his head forward the hearing was improved for a few seconds then blocked as before. Examination showed the left ear drum retracted and dark pink in color. There was evidence of fluid in the middle ear. Myringotomy was done and several drops of thin, watery discharge expelled, with almost immediate relief of symptoms. On 3-16-49 the drum was healed and hearing was normal. On 3-30-49 the condition was entirely quiet and the patient stated he had had no further difficulty.

Case 5.—Dr. W.B., age 28, was seen on 12-14-48 with a history of difficulty with the right ear of ten days' duration, manifesting itself by autophony and marked deafness without pain or discharge. Examination revealed the right drum to be altered in luster and slightly retracted; the middle ear reflex was altered. The eustachian tube inflated easily, with evidence of fluid in the middle ear as shown by "cracking sound." Myringotomy was done and several drops of thin, watery, discharge expelled with immediate relief. On 2-2-49 the condition was entirely quiet, and the drum healed.

Case 6.—Mrs. R.A.N., age 62, gave a history of ear trouble of ten days' duration, manifesting itself by deafness, bilateral, more on the right, following a severe head cold. On examination the left ear was negative. The right ear showed a drum membrane which was thickened and the questionable presence of fluid in the middle ear. The impression at that time was that this patient apparently had severe secretory otitis. Myringotomy was done and several drops of thick, syrupy, amber colored liquid expelled from the middle ear. The patient was treated on 3-4-49, 3-11-49 and 3-14-49. On her last visit the drum was healed and she stated that the condition was entirely cleared.

CONCLUSIONS

1. Skillful myringotomy followed by a riged, dry techinc has not impaired the integrity or function of a middle ear or drum membrane.

2. In cases in which there is real reason to suspect fluid in the middle ear and it can not be proved present or absent on thorough examination, myringotomy will do no harm, and may do a great deal of good.

3. Secretory otitis media will persist (on the basis of our experience) for at least four months, and it is not unreasonable to suspect that permanent adhesive deafness may have its birth in this lesion if prompt and proper treatment is not received.

4. Secretory mastoiditis is occasionally seen in the presence of secretory otitis media. It occurred in two of our 90 recorded cases.

5. The stages of secretory otitis media as far as the fluid is concerned are apparently, first, a thin, serous, transudate which gradually changes into a syrupy consistency and which finally becomes a thick, gelatinous material requiring, perhaps, a few days to a few weeks to pass through these various stages.

6. Repeated myringotomy occasionally is necessary and does no harm. The middle ear must be kept free of fluid.

7. There have been but few recurrences of the lesion in our series of 90 cases.

8. The disease is doubtless self-limited in many cases, but when adequately treated its response is so prompt, effective and complete, that a policy of *laissez-faire* is difficult to justify.

BIBLIOGRAPHY

1. Tobey, Harold G.: The Role of Virus Infections in the Etiology of Serous Otitis Media. The Laryngoscope, Vol. LIX, Jan. 1949, pp. 35-47.
2. Hoople, G. D.: An Otolarygologist's Experience-World War II, Trans. Am. Laryngol., Rhin, and Otol. Soc., Inc., pp. 183-191, 1946.
3. Politzer, Adam: Diseases of the Ear, p. 273.

FLUORINE IN FOODS

A survey of recent analytical data for fluorine in foods has been compiled. The majority of foods found in the average diet contain from 0.2-0.3 ppm or less fluorine in the food as consumed. Tea and seafoods are notable exceptions, the former containing upwards of 75 to 100 ppm fluorine in the dry tea, whereas seafoods may contain 5-15 ppm fluorine.

Cow's milk contains about 0.1-0.2 ppm fluorine. Fluoride added to the cow's ration or drinking water has no influence on the milk-fluorine. Fluorine in soil and water has little or no influence on the fluorine content of edible plant produce. Although the dates are limited, it appears that natural food-borne fluorine is largely available for body assimilation.

Exclusive of drinking water, the average diet appears to provide 0.2-00.3 mg. of fluorine daily. However, it has been observed that an additional intake of fluorine during formative tooth life, via drinking water containing 1.00 ppm or slightly more fluorine is a distinct dental health advantage.

It is justifiable, therefore, to consider the possibility of a direct dietary fluoride supplement where the drinking water does not provide a dental optimum quantity of fluorine.—F. J. McClure, Ph. D., in Public Health Reports.

EPIGASTRIC HERNIA*

(REPORT OF CASES)

By WALTER R. WILKINSON, M. D.**
Huntington, W. Va.

Although the existence of epigastric hernia has been known for centuries and its significance appreciated for decades, there is a paucity of current literature regarding this condition and only meager discussions in our present surgical textbooks. The purpose of this paper is, to review the subject briefly, and to report the study of a series of eighteen cases, many of which had been previously overlooked.

Epigastric hernia has been known as a clinical entity since its description in 1285 by Arnauld de Villeneuve. It is defined as a primary herniation through the linea alba, between the ensiform cartilage and the umbilicus (figure 1). The hernial protuberance may consist of properitoneal fat alone, or in combination with a peritoneal sac which may contain abdominal viscera. This discussion will not deal with the large epigastric hernia containing an abdominal viscus, but will be limited to the small, frequently invisible hernia containing merely properitoneal fat.

REVIEW OF LITERATURE

Anatomy.—The linea alba is a tendinous raphe produced by the junction of the sheaths of the recti bilaterally and extending from the xyphoid process to the symphysis pubis. It is wider above the umbilicus than it is below, and is separated from the peritoneum posteriorly by the transversalis fascia. On either side it presents apertures for the passage of vessels and nerves. The falciform ligament of the liver is composed of two layers of peritoneum enclosing adipose tissue. This ligament is attached to the posterior surface of the sheath of the right rectus muscle as far down as the umbilicus. The fat of the falciform ligament is believed by some to be the tissue constituent in small epigastric hernias. Moschcowitz[1] believes that at the point where the vessel pierces the transversalis fascia there is an outward prolongation of this structure and the hypothetical space between the transversalis fascia and the posterior rectus sheath is obliterated and, consequently, as these same vessels pierce the liena alba, the fat contained in the falciform ligament may be forced into this space. He states: "As a result of my observations upon epigastric herniae, I am able to assert unequivocally that I have never failed to isolate a distinct, large vessel coming through the hiatus, accompanied by a larger or a smaller piece of fat directly continuous with the fat of the falciform ligament." This observation is not unchallenged. Pollock[2], for example, in a review of his series of 45 cases, reports a vessel coming through the hernial hiatus in only two cases.

The great majority of small epigastric hernias do not have a peritoneal sac, and it is an interesting paradox that an epigastric hernia of properitoneal fat alone cannot be felt from within the abdomen.

Pollock[2] describes an occult type of epigastric hernia which occurs beneath the intact linea alba. A peritoneal sac may form through a defect in the transversalis fascia and spread interstitially beneath the intact linea alba. The most important diagnostic feature in such cases is one central point of tenderness without evidence of a mass. The local pain caused by this type of epigastric hernia is due to pinching of the herniated fat at the small hernial hiatus. The mechanism of pain in those patients having intra-abdominal symptoms is still a matter of conjecture. Moschcowitz[3] attributes gastric symptoms to dragging upon the fat and peritoneum of the falciform ligament. A reflex to the celiac ganglion by way of the intercostal nerves is a plausible explanation.

Incidence.—In Sebba's[4] collected series of 28,348 cases of hernia, he found the incidence of epigastric hernia to be 0.8 per cent, while others found 1 per cent or less of all hernias coming to surgery. The incidence of epigastric hernia is greater than is suggested by statistics. The results of examinations for induction into the United States Army support this belief. The majority of cases occur in males and are most frequently encountered in the twenty to thirty year age group. Extremes of age have been reported from nine to seventy-three years.

Epigastric hernia is associated frequently with other forms of hernias, a fact which seems to reveal a predisposition to hernia development in some people. Ten of the 45 cases of epigastric hernia reported by Luke[5] had an associated hernia present or previously repaired.

Etiology.—As in all hernias, the etiology of epigastric hernia is either congenital or acquired. The acquired form is by far the more frequent. The predisposing causes usually are trauma and prolonged strain on the abdominal muscles. Friedenwald and Morrison[6] believe that further etiologic factors have been noted in the form of weakness of the abdominal muscles caused by

*Presented before the Cabell County Medical Society at Huntington, West Virginia, February 17, 1949.

**From the Surgical Service, Brooke General Hospital, Fort Sam Houston, Texas. The contents of this paper do not necessarily express the opinion of the United States Army Medical Corps.

prolonged illness, emaciation, or excessive vomiting or coughing. Epigastric hernia is relatively common in male laborers, and has been noted frequently in coal miners.

Luke[5] contends that a congenital defect as a cause of epigastric hernia is unlikely except in rare cases. He explaines that the age incidence usually is middle life, that there is no pre-formed sac, and that if a defect were present, herniation would appear earlier because the transversalis fascia would be the only barrier. Conversely, Pollock states that there is a growing impression that most of the defects in the linea alba are of congenital origin. He refers to the curved, fine fasciculus decussating across the midline above and below the hiatus, with convexity toward it, as important characteristics of the congenital hiatus.

Symptoms and Diagnosis.—This particular type of hernia incites interest because it frequently causes symptoms similar to those of intra-abdominal lesions. Although it is logical to assume that symptoms of intra-abdominal lesions are encountered more frequently in the large epigastric hernia containing an abdominal viscus, it by no means excludes the small hernia containing merely properitoneal fat.

The symptoms of epigastric hernia vary from complete absence to an acute, knife-like, colicky, epigastric pain not unlike that of a ruptured peptic ulcer. This type of hernia may vary in size from 1 cm. to 3 inches in diameter. Friedenwald and Morrison[6] quote Richter: "These forms of hernia frequently are not discovered and the symptoms produced by them usually are ascribed to other causes." They conclude that the gravity of the symptoms observed in this disease frequently is entirely out of proportion to the physical observations.

There is no definite symptom syndrome associated with this type of hernia. The predominating complaint usually is a burning, catching, or pulling sensation in the epigastrium which often is more marked on straining or lifting. Frequently, there will be radiation of this pain to either or both sides of the upper and/or lower abdomen. These, then, are the usual complaints, but they do not rule out the fewer cases with symptoms suggestive of intra-abdominal pathology. Moschcowitz[1] believes that the symptomatology of epigastric hernia, no matter how large or small, has a striking similarity to that of gastric ulcer. Acute epigastric pain with nausea, vomiting and generalized weakness is sometimes the presenting complaint.

In a large percentage of cases the hernia will not be visible. Examination of these patients in the erect posture with increased intra-abdominal pressure by straining will sometimes make the hernia visibly evident. Oblique lighting is used to advantage. They are more easily discovered by palpating with one finger rather than with the whole hand. The palpating finger will feel a soft, globular mass which is fixed posteriorly but not anteriorly. The skin may be rolled easily over the hernia mass. Irreducibility is the usual rather than the rare finding.

Epigastric hernia is not to be confused with other types of hernia occuring in the epigastrium, i.e, incisional, ventral, et cetra. Unfortunately, the name does not accruately indicate the type or location of the hernia. Any patient with a complaint of either superficial or intra-abdominal epigastric discomfort (pain) should be carefully examined for epigastric hernia. Subcutaneous lipomata, when occuring in the midline, may resemble epigastric hernia, but the lipoma is not attached posteriorly and causes no symptoms. The diagnosis of epigastric hernia depends upon a greater awareness of the condition and a careful, thorough examination of the midline of the epigastrium.

REPORT OF CASES
(See Table)

This report covers two periods. In a nine month period (January 1, 1946, to September 30, 1946) 272 cases of all types of hernia were treated at Brooke General Hospital. Five of these (1.8 per cent) were of the epigastric type. In the following six-month period (November 1, 1946 to April 30, 1947) when we were more conscious of the existence of this condition, 176 cases of hernia were treated, thirteen of which were of the epigastric type, an incidence of 7.3 per cent. This finding of increased incidence supports the hypothesis that epigastric hernia is more common than is suggested by the statistics. As in the series of others, the majority of cases (sixteen) occurred in males and in the twenty to thirty year age group. The age range was from 3 to 58 years. It is of interest to note that one of the cases in this series was a girl three years of age.

History of Case.—A.E., a 3 year old female, was admitted to the pediatric section of Brooke General Hospital with a history of epigastric pain of seven months' duration. Her parents stated that she repeatedly complained of pain in her "stomach" and, pointed to an area above the umbilicus as the site of the pain. Due to the age of the child it was impossible to get a clear description of her symptoms without asking leading questions. It was our impression that the main complaint was that of a superficial

tugging sensation. Examination revealed an epigastric hernia about 1½ cm. in diameter located 1 inch above the umbilicus. The remainder of the examination was essentially negative and the laboratory studies were within normal limits. A transverse incision was made directly over the small hernia and carried down to the anterior rectus sheath on one side; by careful sharp and blunt dissection the midline was approached. A small mass of properitoneal fat was seen emerging from the midline of the linea alba. Careful dissection revealed no accompanying blood vessel; however, there was a small, empty peritoneal pouch associated with the properitoneal fat. The fat and sac were ligated and excised. A pants-over-vest repair was done, utilizing interrupted cotton sutures. Convalescence was uneventful and upon discharge the child was symptom free. Six months following surgery the parents informed me that the child was carrying on the usual vigorous activities of the average child of that age, and had absolutely no complaints referable to her epigastrium.

It is believed that the foregoing case represents an epigastric hernia of congenital origin, although nothing but the age justifies this contention. The patient was younger than any reported in the reviewed literature. The remaining cases in this series are believed to represent the acquired form.

In three of the eighteen cases other forms of hernia were present. One patient had two epigastric hernias.

History of Case.—A.R., an eighteen year old soldier, was admitted to Brooke General Hospital with a history of having had two small epigastric masses present for about ten years. There was slow but progressive enlargement of these masses, but only recently did he begin to have a sharp, darting pain in the epigastrium upon exertion. Examination revealed two visible masses, one in the upper third of the midline of the epigastrium and the other immediately above the umbilicus. There was some debate as to the type of the hernia situated adjacent to the umbilicus. This patient underwent double hernioplasty, the upper hernia being repaired through a vertical incision by lateral approximation by imbrication, and the lower by a pants-over-vest imbrication through a transverse skin incision. Operation proved the lower hernia to be epigastric in nature. His postoperative course was uneventful and he was discharged symptom free.

The duration of symptoms varied from several hours to many years, the average being about two years. Twelve of the patients in this series had local symptoms only, the discomfort being limited to the superficial abdomen. The most frequently mentioned terms used to describe the local symptoms were catching, pulling, dragging, cramping and needle-like pain. All of the patients had tenderness to palpation of the hernia in varying degree. Increased pain on straining or lifting was a frequent complaint.

Six patients had symptoms similar to those of intra-abdominal lesions; three patients had a previous, or referred, diagnosis of peptic ulcer.

Upon critical review of these cases, one is impressed with the number of epigastric hernias that are overlooked. Although the symptoms in this type of hernia frequently are similar to those of intra-abdominal lesions, a careful history taking will show that they do not follow a typical pattern of such. That they are overlooked is clearly illustrated in the following summary of a case.

History of Case.—F.W., a 23 year old negro army truck driver, was admitted to Brooks General Hospital late one evening with a history of having had sudden onset of acute cramping, epigastric pain while sitting in a movie approximately four hours prior to admission. The referred diagnosis was possible perforated peptic ulcer. A more detailed history indicated that there was no nausea or vomiting and that bowel movements had been normal in number, color and consistency. There was no history of previous pain. Laboratory studies were within normal limits. The impression of the admitting physician after cursory examination was acute gastritis. He was admitted to the hospital, and gastric suction was instituted. According to the progress notes on the patient's chart, his abdomen was always soft and his general condition did not seem to warrant the previous clinical impressions. Gastric suction was discontinued after two days. Gastric analysis revealed hypoacidity. A gastrointestinal series was negative except for irritability of the duodenal bulb which the roentgenologist assured me was not an unusual finding even in patients with no gastric or duodenal pathology. After several days in the hospital reexamination revealed a very small, invisible mass in the midline of the epigastrium. At surgery a small mass of properitoneal fat was seen emerging from the linea alba midway between the ensiform cartilage and the umbilicus. The patient had an uneventful convalescence and upon discharge was symptom free.

TREATMENT

When we consider those cases of epigastric hernia which are composed of properitoneal fat

alone, or in combination with a small peritoneal sac without omentum, the treatment can be classified into three groups. However, it must be remembered, of course, that each case is an individual and must be treated as such.

Group 1.—No symptoms and no local tenderness. These are the hernias found on routine examination, or in those cases in which the patient presents himself with a small "lump" in his midline that was found accidentally and was questioned. No surgical treatment is indicated. The diagnosis should be explained to the patient and he should be reassured. If there is subsequent enlargement or development of symptoms, the patient should again consult a physician.

Group 2.—If the patient has pulling, burning or catching local epigastric pain, accentuated upon pressure on the hernia, or upon straining, surgical repair is indicated. If there is no relief of symptoms postoperatively, the patient should have further clinical investigation.

Group 3.—Symptoms referable intra-abdominal disease with or without local symptoms. The patient should have the benefit of thorough clinical laboratory and x-ray examination. If internal pathology is found, that disease should be treated first or in conjunction with repair of the hernia. If the studies are negative for internal pathology the hernia should be repaired, with close follow-up of the patient. This varies somewhat from the recommendations of Sullivan and Antupit[7], Pemberton and Curry[8], and Luke[5]. These observers advise abdominal exploration in cases of epigastric hernia in which there are symptoms of intra-abdominal disease, even though x-ray and other studies are negative for intra-abdominal pathology. Their attitude is founded on cases in which intra-abdominal lesions have been found even though preoperative studies had been negative. Also, their series of cases includes epigastric hernias containing abdominal viscera. My opinion is based solely upon small hernias containing merely properitoneal fat and on the series of cases mentioned in this paper in which the average age is considerably younger than in other reported series.

If surgical repair is indicated, there are several equally acceptable methods. Watson[4] advocates a midline incision over the hernia with enlargement of the hiatus in the vertical direction and lateral approximation by imbrication. Another method is the pants-over-vest repair which is also an accepted technic for umbilical hernioplasty. If the hernia is within two of the umbilicus, the pants-over-vest repair is preferable because interference of the umbilicus would be encountered if the other methods are used. Berman[9] recently has offered a new method of repair in which the rectus muscles are approximated in the midline and the anterior rectus sheaths are approximated by imbrication as are the posterior sheaths.

The rate of recurrence varies from 3 per cent to 14.2 per cent in different series. The highest incidence of recurrence in primary hernia is seen in the epigastric type.

The follow-up in this series is not adequate. There was one recurrence, and that was in a patient four months postoperatively. He was a former Japanese prisoner of war who had a medical diagnosis of beri-beri and who was being observed on the surgical service for peripheral vascular disease. He had a comparatively large, asymptomatic epigastric hernia which was increasing in size. Operation at that time represents an error in surgical judgment.

TABLE SHOWING BREAK-DOWN OF 18 CASES OF EPIGASTRIC HERNIA

No. of Patients	18
Male	16
Female	2
Average Age of Patient (years)	28
Oldest (years)	58
Youngest (years)	3
Shortest Duration of Symptoms (hours)	3
Longest Duration of Symptoms (years)	10
Patients With Local Symptoms Only	12
Patients With Symptoms Suggestive of Intra-abdominal Disease	6
Patients With Other Types of Hernia Present	5
Sac Present (No Omentum or Abdominal Viscera)	2
Operative Cases	16

SUMMARY

1. Epigastric hernia is a primary herniation of properitoneal fat through the linea alba between the ensiform cartilage and the umbilicus.

2. There are two important things to remember in regard to epigastric hernia:

a. There must be a greater awareness of epigastric hernia and the similarity of its symptoms to those of intra-abdominal disease.

b. A thorough examination of the midline of the epigastrium usually is necessary to locate an epigastric hernia.

3. The fat of the falciform ligament was not involved in any of the cases in this series. Likewise, a large, distinct vessel was seen to emerge through the hernia hiatus in but one of these patients.

4. A classification for the treatment of epigastric hernia containing merely properitoneal fat is offered.

5. Case histories are presented.

BIBLIOGRAPHY

1. Moschcowitz, A. V.: The Pathogenesis and Treatment of Herniae of the Linea Alba, Surg., Gynec. and Obst. 18: 504-507, 1914.
2. Pollock, L. H.: Epigastric Hernia, Am. J. Surg. 34: 376-378 (Nov.) 1936.
3. Moschcowitz, A. V.: Epigastric Hernia without Swelling, Ann. Surg. LXVI, 300, 1917.
4. Sebba, quoted by Watson, L. F.: Hernia, ed. 2, St. Louis, C. V. Mosby Co., 1938.
5. Luke, J. C.: The Significance of Epigastric Hernia, Canad. Med. Assoc. J. 149-152 (August) 1938.
6. Friedenwald, J., & Morrison, T. H.: Epigastric Hernia: A Consideration of Its Importance in the Diagnosis of Gastrointestinal Disease, J.A.M.A. lxxxvii, 1466-1470 (October) 1926.
7. Sullivan, Daniel F., & Antupit, Louis: Epigastric Hernia and Its Relation to Intra-abdominal Disease, Ann. Surg. lxxxvi, 413, 1927.
8. Pemberton, John de J., & Curry, Fillmore S.: The Symptomatology of Epigastric Hernia, Minn. Med. 19: 109 (Feb.) 1936.
9. Berman, Edgar F.: Epigastric Hernia: An Improved Method of Repair, Am. J. Surg. lxviii, 84-86 (April) 1945.

LITTLE KNOWN ABOUT ULCER

We know very little about ulcer; it would be foolhardy to deny it. The intricate interdependent relationships of the digestive glands and their secretions are not fully understood.

That emotional urges, whether under or beyond the control of the will, may affect the susceptibility of the juxtagastric mucosal surfaces to injury by acidpeptic juice is understandable. That the behavior of emotional urges which affect unfavorably the relationship between vulnerability to acid-peptic digestion and the interaction, quantity, quality, and the time factor in the delivery—that patients who have ulcer may learn to govern these complex relationships and thus thwart the ulcer diatheses is as absurd as to believe that we can guide the movements of the stars by thinking that we can.

The medical management of ulcer is sound, but its scope is limited by our very inability to accomplish consistently what we set out to do.—Owen H. Wangensteen, M. D., in Wisconsin Medical Journal.

APPETITE GUIDE TO NUTRITIONAL NEEDS

The belief that unprejudiced appetites can serve as a sound guide to nutritional needs has arisen as a result of certain experimental, clinical and anthropological studies involving both animals and man. This phenomenon has been attributed variously to some unexplained "instinct"; to altered taste thresholds under conditions of nutritional or endocrine deficiency; or to "education" as a result of the experience of beneficial efforts from consuming an adequate diet.

Although a great deal of confirmatory evidence has been accumulated in apparent support of this belief, the general opinion of nutritionists is that more comprehensive studies subjected to careful statistical analysis are needed before any definite conclusions pro or con can be drawn.—Ruth Woods in Borden's Review of Nutrition Research.

A SIMPLIFIED TEST FOR THE LOW SODIUM DIET

Test for Primary Water Depletion vs. Primary Salt Depletion

By MAX KOENIGSBERG, M. D.,
Charleston, W. Va.

Despite the raging controversy over the relative value of the rice diet vs. the low sodium diet in the treatment of hypertension, most observers agree that there is need of sodium restriction in cases of congestive heart failure regardless of etiology. Starr[1] summarizes the probable course of events leading to congestive heart failure in the following manner:

TABLE II

A Suggested Train of Events Leading to Congestive Heart Failure

1. Heart disease (cardiac dysfunction).
2. Diminished circulation to (a) kidney, (b) bone marrow, (c) other.
3. Retention of Na Cl and H_2O.
4. Increased blood volume.
5. Venous congestion.
6. Stimulation of heart from increased filling pressure.
7. Further damage to heart.

The average patient not confined to a hospital is not apt to follow successfully a low (200 to 500 mg.) sodium routine unless he has available a simple test whereby he can ascertain whether or not he is maintaining proper water-sodium balance, comparable to the maintenance of the proper blood sugar level in the diabetic patient. Moreover, since it is not reasonably possible to list all foods that a particular patient may eat, the individual unawarely may consume food containing too much sodium.

For the past year I have had all cardiac patients, when indicated, as well as hypertension patients, on either a rice diet or a low sodium diet, check their urines at home according to the following outline:

Test for Urinary Sodium Chloride

1. Urine should be collected just after awakening in the a. m.
2. Add 10 drops of urine to test tube.
3. Add 1 drop of YELLOW SOLUTION. Shake well.
4. Add 1 drop of CLEAR SOLUTION at a time—shake well between each drop—until a permanent LIGHT BROWN or BRICK RED color results.

Always use the same medicine dropper for the same solution.

Always hold the medicine dropper straight up and down.

If the low (200 mg.) sodium diet is being followed satisfactorily, the urine test should show a BRICK RED color after adding 1 to 8 drops of the CLEAR SOLUTION (see step No. 4 above).

A permanent record of the number of drops of the CLEAR SOLUTION needed to give a BRICK RED color should be kept for each test.

Salt substitutes will give a false reaction and thus prevent an accurate evaluation as to whether the diet is being followed satisfactorily.

Interpretation of Test.—This is a test for chloride. The CHLORIDE ION in food and drinking water is accompanied by SODIUM in approximately the same ratio as in common table salt (sodium chloride) and is a rather accurate index of the amount of sodium present. The most important exception to this fact is when the chloride ion is ingested in an artificial form such as salt substitutes which usually contain potassium and/or ammonium chloride.

The yellow solution is 10 per cent potassium chromate, an indicator. The clear solution is 0.74 per cent silver nitrate. Potassium chromate reacts with silver nitrate to form a brick red precipitate (silver chromate) thus producing a definite end-point; however, in the presence of the chloride ion and silver nitrate a white precipitate (silver chloride) forms, and it is not until all of the chloride has gone into combination with silver that any silver is free to form silver chromate (the brick red precipitate).

Clinical experience has shown that the previously stated strengths of the test solutions are approximately optimal for practical purposes when this procedure is used to control patients on the low (200 mg.) sodium diet. Thus each drop of the clear solution (0.74 per cent silver nitrate) necessary to obtain the endpoint is approximately equivalent to .25 Gm. chlorides/liter, expressed as sodium chloride.

The first urine specimen passed on awakening represents the most highly concentrated urine and is least likely to vary from day to day provided the diet and fluid balance are constant. Variations in the volume of ingested fluid or the amount lost by extrarenal mechanisms obviously influence the results of the test. The average daily urinary output varies from 1 to 1.5 liters.

The low (200 mg.) sodium diet contains chlorides in amount approximately equivalent to 1 Gm. of sodium chloride. Urinary studies of sodium and chlorides show that when this test for chlorides runs from 1 to 8 drops of the clear solution ($AgNO_3$) the patient is following the diet satisfactorily.

This simple and practical test which can be done in about one minute enables the patient to determine easily whether or not the diet is being properly followed. The test was devised by Doctor Bryant of the University of Michigan who has been using it routinely in cases of patients on a 200 mg. sodium diet. Salt substitutes should not be used since they will give falsely positive reactions.

As has been stressed in the literature recently, patients with poor kidney function need a diet higher in salt (1,000 mg. or more) due to the inability of the diseased kidney tubules to reabsorb sodium and water. There is further sodium loss in such cases resulting from the failure of the impaired kidneys to produce ammonia which normally tends to conserve the sodium ion. These two factors, i. e., increased sodium loss and increased sodium utilization due to a decrease in ammonia production, often will produce too great a sodium depletion and thereby a decreased alkali reserve, or acidosis. Therefore, when sodium restriction is advisable in such cases the test is of particular value and has enabled the author to maintain many patients with cardiac disease plus diminished kidney function on a sufficiently restricted sodium diet so as to reduce the frequency of mercuhydrin injections.

Peters[2] states that the evidence concerning control of the reabsorption of sodium salts is not as direct as that favoring the check of antidiuretic hormone on water absorption. He believes that "from inferential evidence, it is tentatively proposed that reabsorption of sodium salts is governed by a steroid secreted by the adrenal cortex." The tie-in of sodium metabolism and the alarm reaction of Selye[3] in hypertension is a much debated subject. Peters also believes that the mercurial diuretics inhibit sodium reabsorption and thereby remove the stimulus to posterior pituitary antidiuretic activity.

When a patient is first put on a low sodium diet, the urinary output should be recorded for the first week and the fluid intake should be sufficient to produce about 1,500 cc. of urine daily. After the patient has determined the quantity of fluid intake necessary to produce an output of 1,500 cc. he should try to maintain that intake, thus eliminating the necessity of measuring the output. Usually, the urinary chloride (sodium) change will be noted within forty-eight to seventy-two hours after the diet has been begun. After that period the test shows only one to eight drops of the clear solution being used; if signs and symptoms of hypochloremia such as weakness, lassitude or hypotension develop one pint of milk will, roughly, convert a 200 mg. diet to a 500 mg. diet. During the hot summer months hypochloremia is more apt to develop in these patients; thus, the test should be watched more carefully. The test should be done five times daily during the first

week or two as indicated on the accompanying chart; after the patient has become stabilized a morning specimen only is examined.

Name..... Address..... Phone No.....

Date	Overnight Specimen		After Breakfast	After Lunch	After Supper	Bedtime
	Drops	Volume cc.	Drops	Drops	Drops	Drops

In some areas the mineral content of the drinking water alone makes it impossible to get the sodium level of the diet down to the optimum[4]. Patients who reside outside of the city limits are given the following instructions with regard to checking their drinking water:

Test for Sodium Chloride in Drinking Water

Note: This test is a modification of the test for urinary sodium chloride and involves the use of the same apparatus and solutions.

1. Use a medicine dropper that has been rinsed many times in water from the same source as that to be tested.
2. Add 40 drops of water to test tube.
3. Add 1 drop of YELLOW SOLUTION. Shake well.
4. Add 1 drop of CLEAR SOLUTION at a time—shake well between each drop—until a RED TINGE appears.

If more than 1 drop of the CLEAR SOLUTION is necessary to produce a RED TINGE, the water contains TOO MUCH SODIUM to be satisfactory, thus water from another source should be obtained, preferably distilled water. In general, water obtained from LAKES and RIVERS usually is satisfactory for use by patients on the LOW (200 mg.) SODIUM diet. WELL WATER, however, may contain sufficient SODIUM as to be unsatisfactory. Also, most WATER SOFTENERS remove the "hardness" from water by replacing it with SODIUM compounds, thus making the water unsatisfactory for patients following this diet.

Interpretation of Test.—When 1 drop of the clear solution (0.74 per cent silver nitrate) with 40 drops of the drinking water produces an endpoint (red tinge), the solution being tested contains 63 mg. of chlorides/liter or p. p. m. expressed as sodium chloride, i. e., 25 mg. sodium, or more.

WATER VS. SALT DEPLETION

Finally, this test has considerable practical application in differentiating at the bedside between what Marriott[5] has referred to as "pure salt depletion" and "mixed water and salt depletion." Although it is quite true that clinically neither very often exists entirely distinct from the other, one may be confronted with a patient in coma or with extreme weakness in whom pure water depletion is the primary problem. Naturally, the routine parenteral administration of normal saline solution to an individual of this type would aggravate his condition considerably.

Van Slyke and Evans[6] have shown that urinary chloride alterations precede changes in plasma chloride concentrations. The information gained from the urinary sodium chloride concentration naturally must be correlated with the clinical findings such as edema, turgor of the skin, dryness of the tongue, appearance of the eyeballs, respiration, et cetera.

These same observers[6], using the method of Fantus, have shown that the information obtained from the urine sodium chloride concentration measurement is extremely valuable in helping one to decide whether or not to administer saline solution. Their studies seem to indicate that when there are at least 3 Gm. of sodium per liter of urine, saline administration usually is not necessary. They recommend that if more than 3 Gm. of salt per liter of urine is found at the bedside or in the emergency room, dextrose solution should be given, and that saline solution should be given if there is less than 3 Gm.

Particularly in the practice of pediatrics will this test be of value since infants succumb much more rapidly to the effects of water deprivation than do adults. It has been estimated that the unavoidable water depletion of an infant is almost twice as great as that of an adult.

CONCLUSIONS

A simplified test for satisfactorily following the low sodium diet, and one which can be performed by the patient at home, is described; also, its clinical application in differentiating between pure (primary) sodium chloride vs. H_2O deficit is discussed.

BIBLIOGRAPHY

1. Starr, I.: Our Changing Viewpoint about Congestive Failure, Ann. Int. Med. 30:15 (Jan.) 1949.
2. Peters, J. P.: The Role of Sodium in the Production of Edema, New England J. Med. 239:353 (Sept. 2) 1948.
3. Selye, Hans: General Adaption of Syndrome & Disease of Adaptation, J. Endocrin. 6:117 (Feb.) 1946; Koenigsberg, M.: Hypertension Today, W.Va. M.J. 44:302 (Nov.) 1948.
4. Cole, S. L.: Tap Water Sodium in the Low Salt Diet, J.A.M.A. 140:19 (May 7) 1949.
5. Marriott, H. L.: Water & Salt Depletion, Brit. M. J. 1:245 (Feb. 15) 1947.
6. Van Slyke, K. K., & Evans, E. I.: The Significance of Urine Chloride Determination in the Detection and Treatment of Dehydration with Salt Depletion, Ann. Surg. 128:391 (Sept.) 1948.

THE APPLICATION OF THORACIC SURGERY

By MAURICE G. BUCKLES, M. D., F. A. C. S.
Columbus, Ohio

A review of the surgical aspects of chest diseases is very difficult to effect in one article or in a series of short presentations. However, this paper is a discussion on the general aspects of the surgical approach to chest diseases and represents as nearly as possible a synopsis of the presentation given before the Cabell County Medical Society.

Lantern slides of x-ray films, drawings and photographs illustrated the lecture. In this report it is possible to touch upon a few points only; I hope that it may give some idea as to the trend of thought from the standpoint of the chest surgeon.

Since chest surgery has made such rapid advances during the past two decades, it seems timely to review some of the accomplishments, thereby helping to clarify some of the diagnostic and surgical features of chest pathology.

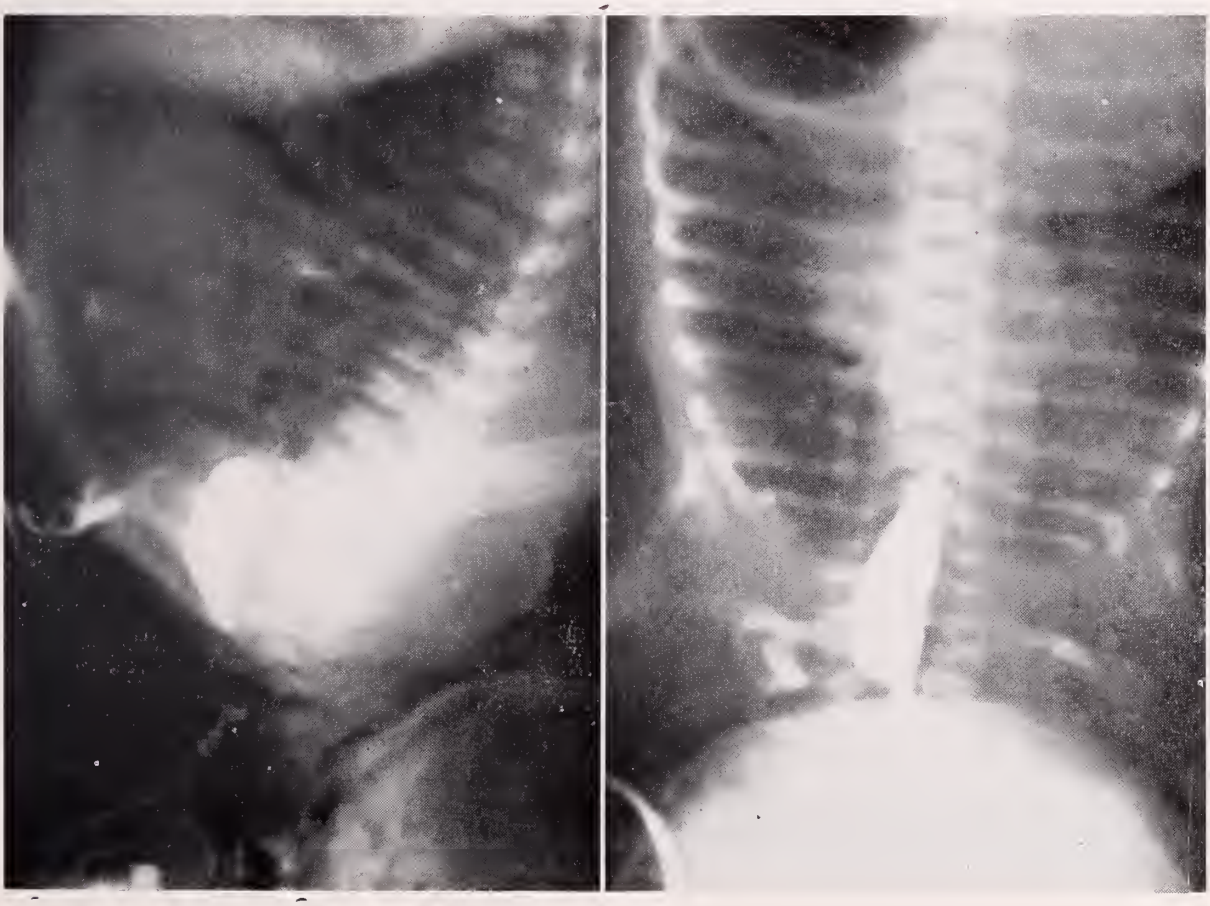
It is important that the practitioner of medicine be familiar not only with the diagnostic features of chest diseases but with their surgical treatment as well, bearing in mind that many conditions of the thorax can be surgically relieved and not looking upon surgery as a measure of last resort.

The various sequences of an adequate chest examination may be as follows:

1. History, with reference to cough, fever wheezing, blood spitting, lack of well being, change in cough pattern, loss of weight, change in voice, difficulty in swallowing. Family history of illnesses and exposures thereto. Occupation, with particular reference to dust (silica, of course, being the most important element). The duration of dust exposure is important. Such occupations as sandblasting, glasswork, foundry work, stone-drilling, mining, asbestos work, et cetera, should be gone into. Beryllium is of more recent clinical significance.

2. Physical examination, temperature, pulse, respiration (rate, depth, symmetry).

(a) Palpation as to lymph nodes (cervical, axillary, epitrochlear, inguinal, et cetera).
(b) Percussion.
(c) Auscultation, with particular reference to expiratory rales (after cough) and to



A B

Fig. 1. (A) Esophageal atresia of newborn. Surgically repaired on 3rd day of life. (B) Lateral film.

localized wheezing which means partial bronchial obstruction; breath sounds also are important.

3. Laryngeal mirror examination should be done.

4. Fluroscopic examination. The fluoroscope often reveals physiologic changes which are not brought out by the x-ray, such as: paralysis of the diaphragm, shifting of the mediastinum on inspiration and expiration, and cardiac irregularities.

5. X-rays, preferably stereoscopic films, also lateral view with interpretation by a qualified roentgenologist.

6. Bronchoscopy. The bronchoscope should be used with much greater frequency because the x-ray does not reveal early bronchial obstruction, neither does it disclose early cancer of the major bronchi. Specimens for biopsy purposes are easily taken through the scope. Foreign bodies are thus excluded or discovered and secretions obtained for bacteriologic and cytologic studies.

7. Iodized oil injection of the bronchi followed by x-ray is the only way accurately to diagnose bronchiectasis and bronchial obstructions located beyond the reach of the bronchoscope.

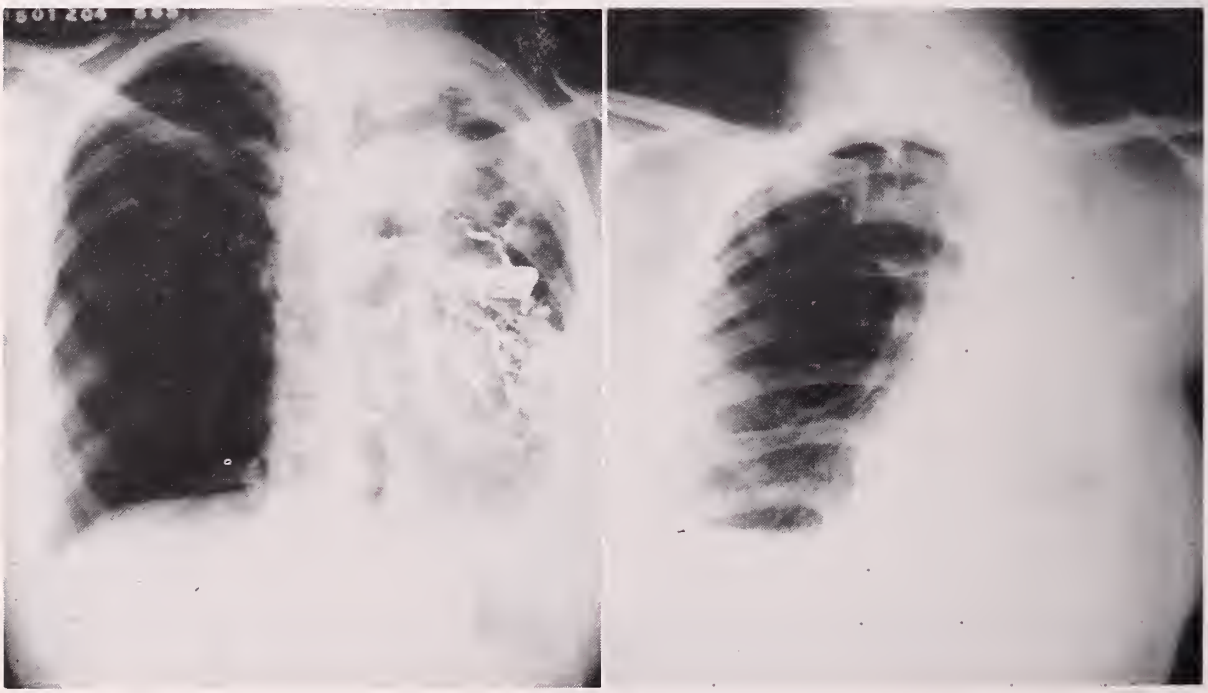
8. Bacteriologic and cytologic studies are easily made as most every section of the country has access to private or free laboratories. The answer to the problem often is in the bacteriology or cytology.

9. Barium swallow tests observed fluoroscopically may show esophageal diverticula, carcinoma, extrinsic masses in the mediastinum and stenoses.

INFANT GROUP

A relatively large number of conditions may occur in infancy and this fact should be borne in mind. Too many deaths are attributed to intracranial injuries and congenital heart diseases which are due to neither although both may coexist. My point is that we should bear in mind other conditions which respond to surgery such as the following:

1. Atelectasis of the newborn, that is failure of expansion of a lung or lobe at birth.
2. Esophageal abnormalities such as tracheoesophageal fistula and esophageal atresia (figure 1).
3. Abnormalities of the larynx such as atresia, polyps, et cetera.
4. Thoracic or "upside-down" stomach.
5. Diaphragmatic hernia.
6. Eventration of the diaphragm.
7. Spontaneous pneumothorax of the newborn.
8. Cystic disease of the lungs.
9. Pulmonary agenesis.
10. Foreign bodies.



A B

Fig. 2. Pulmonary tuberculosis, far advanced. (A) Before pneumonectomy. (B) After pneumonectomy and thoracoplasty.

11. Circulatory abnormalities such as (a) patient ductus arteriosus and (b) blue baby group with pulmonic stenosis.

I make a plea here for x-ray of the chest of every newborn which does not breathe well, as this frequently gives a clue to the underlying pathology.

PULMONARY TUBERCULOSIS

When bed rest proves inadequate, tuberculosis usually becomes a surgical disease in our efforts to close cavities and convert a positive sputum into a negative one. The prognosis is exceedingly poor as long as the tubercle bacillus is found in either the sputum or the stomach washings.

Surgery is carried out in a number of ways:

1. Pneumothorax.
2. Phrenic nerve crushing.
3. Thoracoplasty.
4. Removal of a lobe or lobes.
5. Other measures which I cannot go into in this short synopsis.

Again, we plead for early surgical consideration before the disease has become so widely disseminated as to render surgery impossible. And again, I say that surgery should not be thought of as a "last resort" measure.

Surgery in pulmonary tuberculosis offers a very satisfactory out come for many cases which were formerly thought hopeless. Within the last few years we have been removing lobes or lungs which were too extensively involved for thoracoplasty (figure 2). The results are very pleasing and it is found the tuberculous patient tolerates surgery surprisingly well.

Streptomycin also has been an aid in pulmonary resection inasmuch as it seems to prevent spread of the disease.

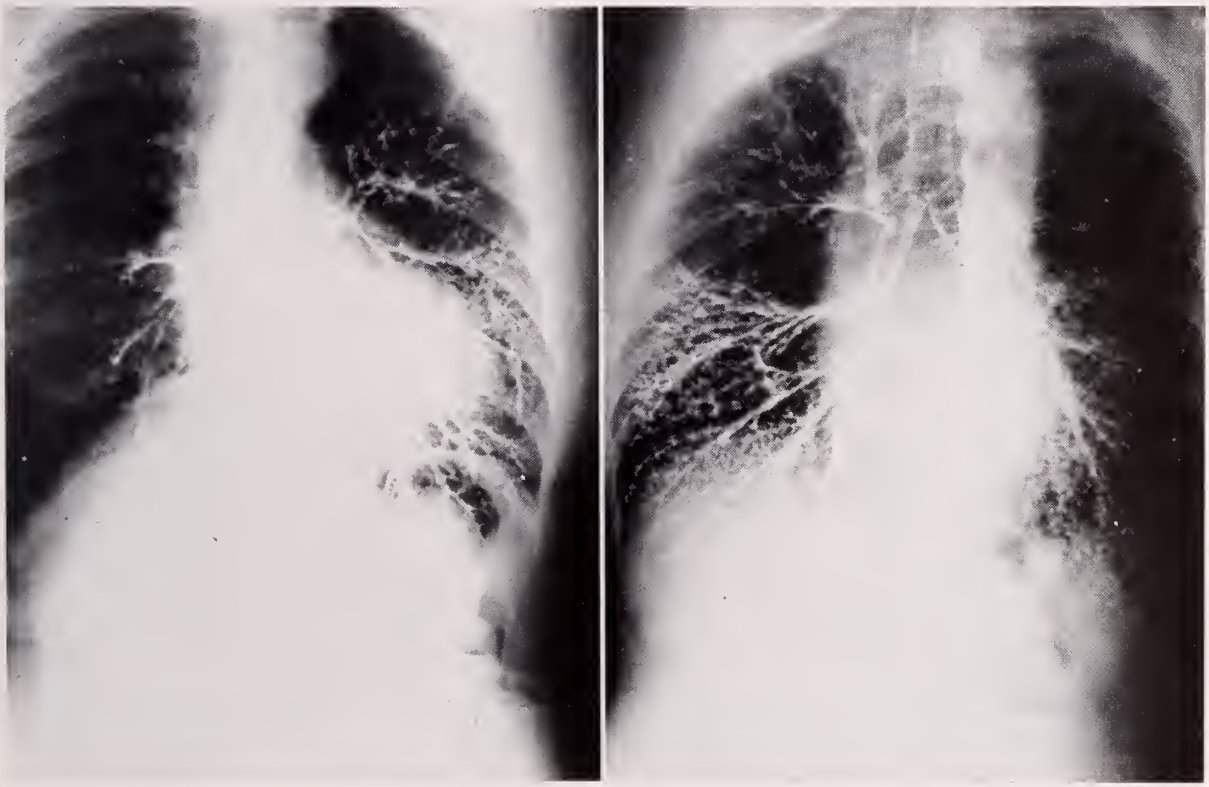
In over seventy pulmonary resections for pulmonary tuberculosis my operative mortality has been 5.5 per cent.

BRONCHIECTASIS

Bronchiectasis means "sacs in the bronchi." These sacs produce cough and sputum, and harbor constant infection. The diagnosis is made by x-ray observation after the injection of iodized oil.

Surgery in bronchiectasis often entails the removal of a lobe, a lung, or a part of a lobe known as a segment. The procedure has become a very safe one. Bronchiectasis must be borne in mind in all cases of chronic cough.

In patients with bronchiectasis the physical examination of the chest usually is of little or no



A B

Fig. 3. (A) Normal right bronchogram showing all three lobes properly filled. (B) Normal left bronchogram showing both upper and middle lobes well filled. The films are taken on slightly oblique position so that the middle lobe on the right and lingula on the left are rotated from overlapping the lower lobes.

value. The rales are either transient or absent. The fluroscope studies show nothing definite and even an x-ray of the chest may give little clue to the existing pathology. In other words, the objective findings are almost nil as compared

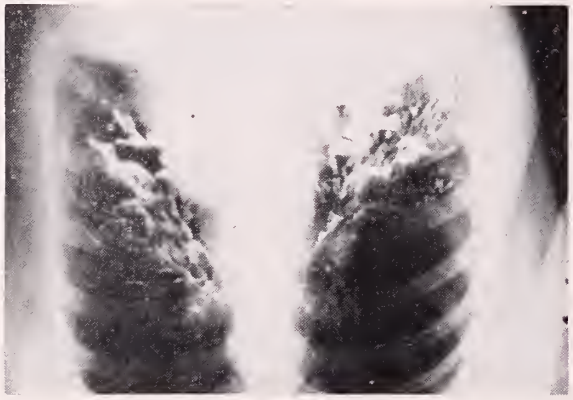


Fig. 4. Bronchogram showing bilateral bronchiectasis of the sacular type. The left lower lobe and lingula were removed in one operation. Three months later the right lower and middle lobes were removed.

with the subjective findings of cough, sputum, recurrent attacks of bronchitis, bronchopneumonia and colds.

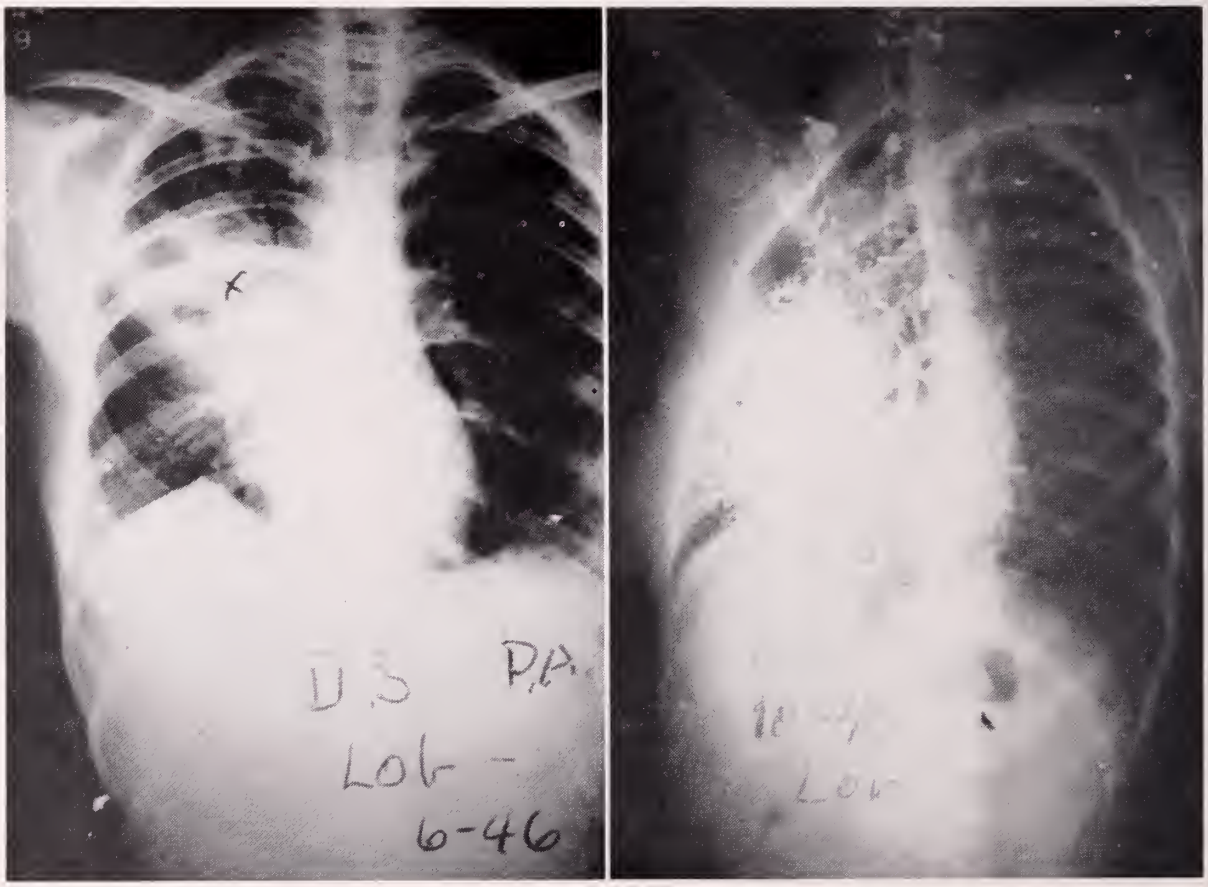
Actually to make the diagnosis, it is imperative to inject, under topical anesthesia, a contrast medium into the bronchi which will outline the bronchi and any deformities which may be present (figures 3 and 4). I use iodized oil, the trade name being "Lipiodol." This, followed by x-ray, irrefutably makes the diagnosis and is one of the most valuable diagnostic procedures used in chest work.

Once the diagnosis is established, the only treatment of value is surgical removal of the "sacs." If the diseased area is not removed, the course of the disease is inevitable, with progressive disability and eventual death in the guise of bronchiectasis or bronchopneumonia, or even heart disease.

PULMONARY ABSCESS

Pulmonary abscess (figure 5), like any suppurative lung disease, is serious. The treatment (if chemotherapy has failed) is drainage or lobectomy.

I feel that removal of the infected area and adequate chemotherapy is the treatment of choice. The combination of both has greatly improved the outcome of pulmonary abscess.



A B

Fig. 5. (A) Pulmonary abscess (multiple). (B) Iodized oil injection showing sacculations of both upper and middle lobes. A multiple lobectomy was performed.

Removal of the entire infected area by lobectomy is far preferable, in many cases, to open drainage.

In reviewing thirty-six cases of open drainage done several years ago we found that the temporary results were misleading and that many of those we considered "cured" came to light later as recurrences of the abscess of bronchiectasis with pulmonary hemorrhage, demanding further surgical intervention. The injection of the diseased area with iodized oil almost always reveals a residual area of bronchiectasis.

Fig. 6. Cancer of right common bronchus with atelectasis of right upper lobe segment.

This, of course, explains why, at the present time, we prefer removal of the area rather than drainage alone.

Carcinoma always should be considered as a possible cause of lung abscess. The high incidence of carcinoma is another reason for removing the entire process rather than performing drainage.

EMPYEMA

The treatment of empyema is one of the most difficult problems in chest work. A few cases respond to frequent aspirations and the instillation of chemotherapeutic agents; however, most all require *wide dependent drainage.* In chronic empyema the chest must be opened wide and the fibrous capsule around the lung removed or peeled off so as to release the lung and thus allow it to re-aerate and re-expand, thereby obliterating the empyema space. This procedure is known as "decortication" and is one of the most progressive steps in the treatment of empyema.

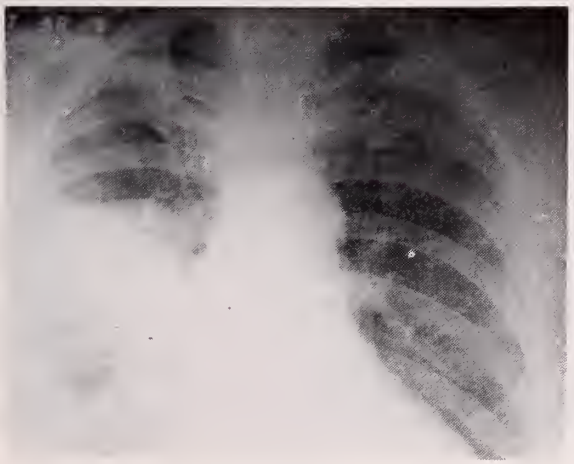


Fig. 7. Cancer of right upper lobe bronchus before pneumonectomy.

The foregoing also applies to hemorrhage into the pleural cavity with clot formation, otherwise a resultant "crippled" lung follows.

Etiology.—The etiology of empyema is always to be borne in mind. Bronchiectasis is one of the commonest causes, that is, extension of the inflammatory process into the pleural space. I feel that every case of empyema should be carefully checked for bronchiectasis.

CANCER OF THE LUNG

The increasing incidence of cancer of the lung is so startling that it behooves every physician to bear it in mind in every patient he sees. It runs neck and neck with cancer of the stomach but fortunately offers a somewhat better prognosis as to cure, probably because it is detected earlier on account of the accompanying cough and x-ray. Perhaps also, by nature of the cellular structure of the bronchial carcinoma, metastasis occurs later in the course of the disease.

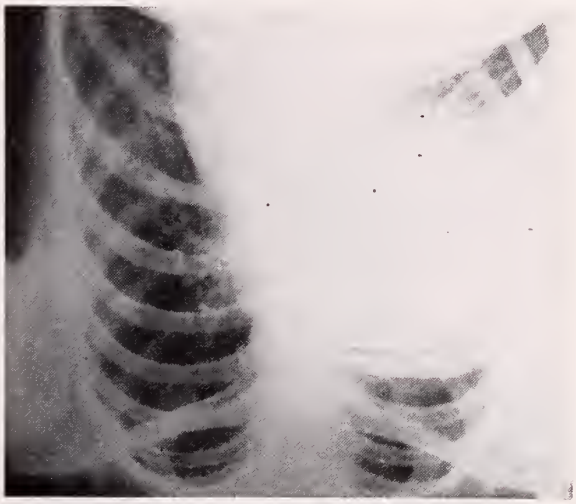
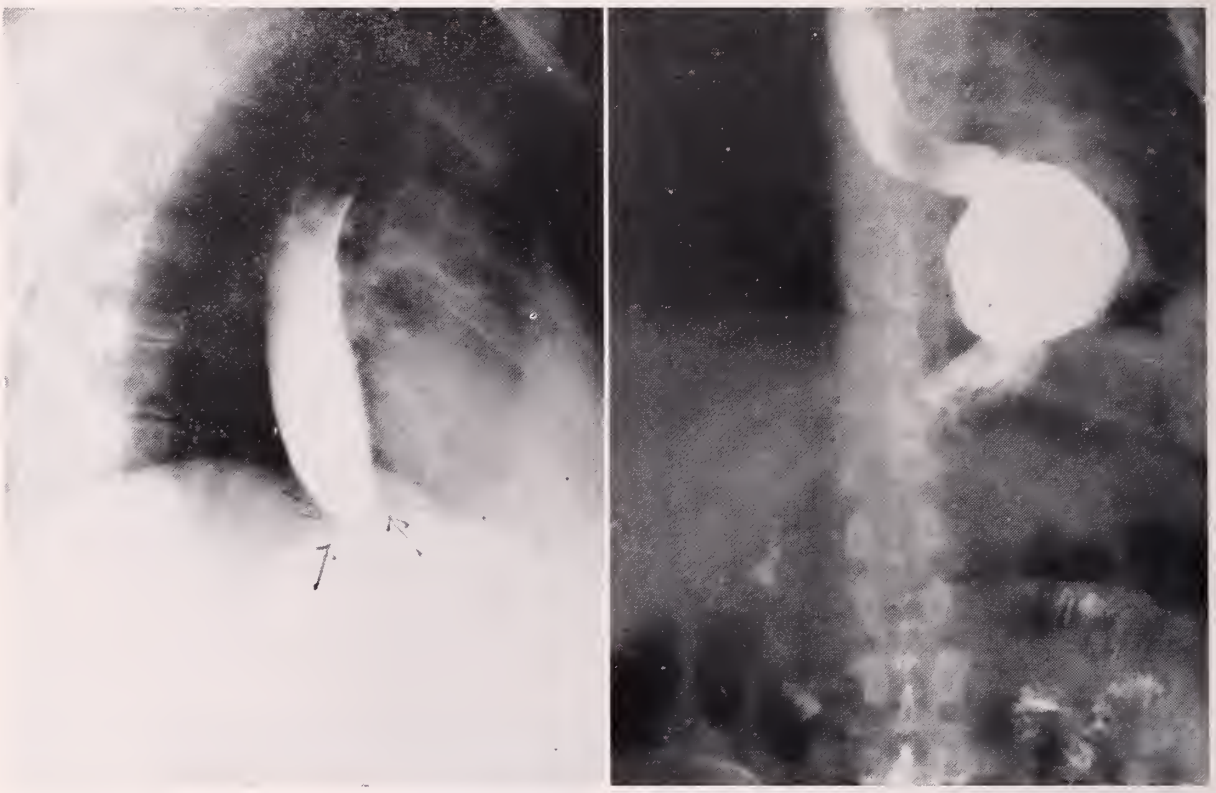


Fig. 8. Right posterior mediastinal tumor, neurofibroma, benign, in an 8 year old child.

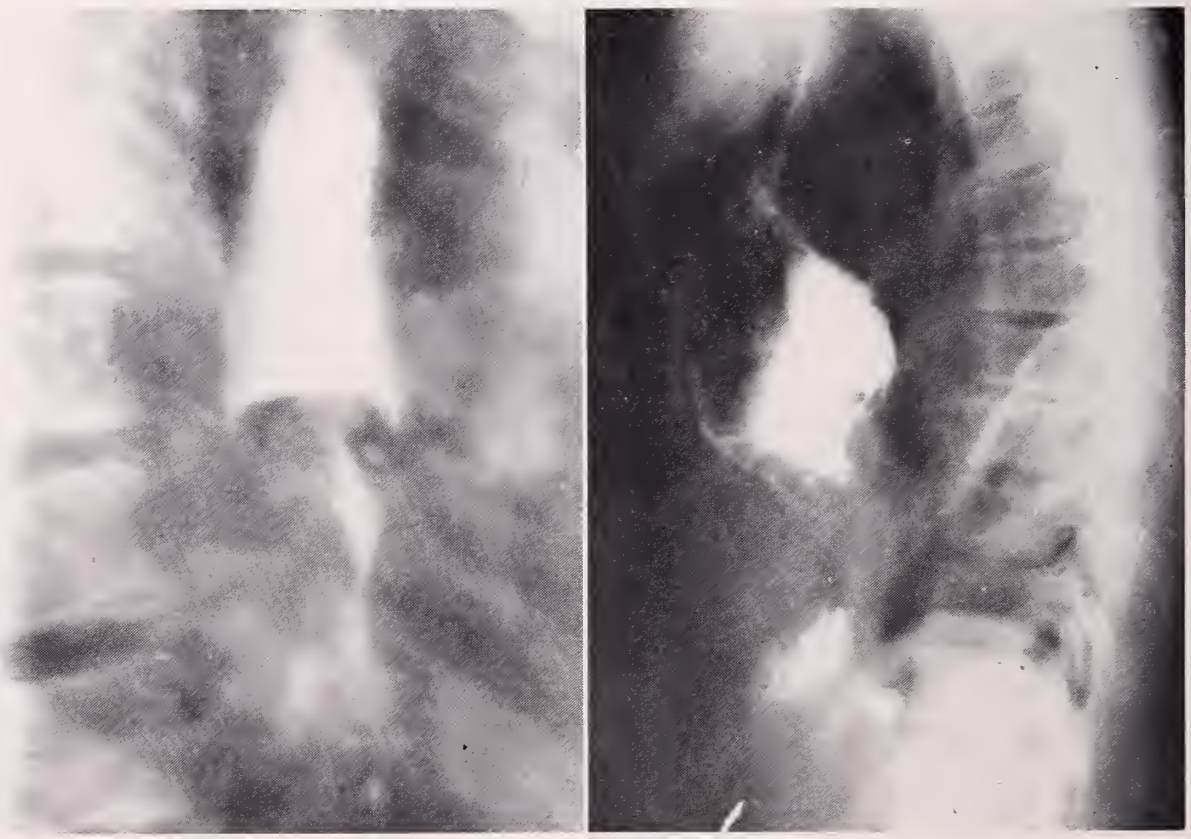
The diagnosis is made by history and the following symptoms and means:

1. Cough.
2. Blood spitting.
3. Wheezing.
4. Pain in the chest.



A B

Fig. 9. (A) Cancer of the distal third of the esophagus and cardiac portion of the stomach. (B) Postoperative film showing stomach in the chest after having been anastomosed in the lower third.



A B

Fig. 10. (A) Cancer of middle third of the esophagus before operation. (B) After operation, the stomach having been anastomosed to the upper third of the esophagus anterior to the aortic arch.

5. X-ray changes.
6. Bronchoscopic biopsy.
7. Exploratory opening of the chest.

Cancer of the lung may simulate both clinically and from an x-ray standpoint any inflammatory process in the chest. There is no clear-cut pattern on x-ray of cancer of the lung. I feel that every persistent x-ray shadow (nontuberculous) should be explored after two or three weeks' observation. If we wait to see what is going to happen, the spread of the tumor will preclude the removal of the disease. The only answer to cancer of the lung is surgical removal and that must be done at the earliest possible time (figure 6).

Any suspected pneumonia which does not clear on schedule should be considered as potentially a carcinoma.

The most confusing differential diagnosis of cancer of the lung is that of bronchopneumonia; however, if we will remember that pneumonias clear completely in a short period of time with chemotherapeutic agents, the majority of them will be excluded. We must not be misled by the fact that a lesion may be practically clear, that is, that the pneumonia around the cancer may improve, leaving a very definite area which may represent a tumor mass. Any area which does not clear completely should be construed as a potential carcinoma of the lung (figure 7).

The operative mortality in pneumonectomy is about 15 per cent and is still declining.

BENIGN TUMORS OF THE LUNG

All benign tumors of the lungs should be removed, first, because about 45 per cent become malignant; second, because they grow and produce clinical symptoms; third, because by obstruction of the bronchus, either partial or complete, they produce infection and degeneration of the lung distal to the benign tumor, causing pulmonary abscess, bronchiectasis and chronic suppurative disease (figure 8).

ESOPHAGEAL DISEASES

The recent advances in esophageal surgery have been such that surgery is safely used in esophageal diseases such as cancer, stricture, cancer of the cardia and esophagus, diverticula (both the pulsion and traction types), esophagotracheal communication and cardiospasm.

Barium swallow tests and esophagoscopy are of great diagnostic value in that a biopsy specimen can be taken and a definite diagnosis made.

The operative mortality of cancer of the distal end of the esophagus is very low. I wish to point out that the degree of obstruction or the age of the patient is no contraindication to surgery.

We have divided esophageal cancer into four groups, depending on its location. These are carcinoma involving the cardio-esophageal junction in which at least a portion of the stomach and lower end of the esophagus have to be removed and the ends reunited; carcinoma of the lower third of the esophagus (figure 9) without gastric involvement (this lends itself easiest to surgical removal from a technical standpoint); carcinoma of the middle third (figure 10); and carcinoma of the upper third (these are technically more difficult but can be accomplished with more ease than formerly thought).

The approach to the above is thru the chest and the operation is accomplished by going through the diaphragm, releasing the stomach and removing the portion of the diseased esophagus, thus bringing the stomach up into the chest and anastomosing the stomach and esophagus.

I have recently had a case of cancer of the cervical esophagus in which the stomach was brought all the way up to the level of the thyroid gland and anastomosed, the result being satisfactory.

CARDIOSPASM

Cardiospasm responds rather easily and safely to surgery. Dilatation may suffice in simple cases, however, when the esophageal wall at the cardia has undergone fibrosis and stenosis, surgery becomes mandatory. The surgical approach is through the chest; exposure is excellent, and the results are very good and permanent.

SUMMARY

Thoracic surgery is well established and is an indispensable adjunct in the treatment of chest diseases. The operative mortalities, so high in the 1930's, are now, greatly reduced.

Cancer of the lung and cancer of the esophagus have been emphasized. In my personal experience, over 350 cases have been diagnosed, thus showing the disease to be obviously common.

Bronchiectasis has been discussed; of 300 operative cases there has been a mortality rate of approximately 3 per cent.

Surgical removal of tuberculous lobes or lungs is the latest surgical development in tuberculosis work.

The infant group is heir to a number of conditions which respond to surgery, including anomalies and malformations of the larynx, lungs, cardiovascular system and upper gastrointestinal tract.

LIBRARY OF THE
COLLEGE OF PHYSICIANS

The President's Page

The pensive mood that is expressed by Longfellow in his poem "The Day is Done" reflects the feelings of one who is attempting to write his final "President's Page."

This year has brought to me much joy, some sadness, and a few disappointments. Any success or progress that has been made must be shared with the members of our Association who have contributed their time and energy toward a successful solution of our many problems. I am most grateful to them. Certainly, there has been no time in the history of our Association when so many of our members have worked in unison for a common cause—better public relations.

Much has been accomplished. Much remains to be done. Continued success depends entirely upon our unity and our ability to continue our campaign against the efforts of the federal government to establish a "welfare state" and to smear the medical profession not only by conducting a vicious propaganda campaign, but by resorting to police state methods.

It hasn't been too easy for us to wage a successful fight against compulsory health insurance, but the real test will come in 1950, and this is a campaign we must win.

Failure to obtain legislative authority for the creation of a four-year school of medicine and dentistry means a continued acute shortage of doctors. We must carry on in this fight because no public relations program can be successful until we are able to supply doctors for areas where the need is great.

We need to continue our efforts toward the extension of voluntary health insurance, the expansion of public health service, and the establishment of clinics and small hospitals in our rural areas.

In the elevation of Charlie Watkins to the presidency we have chosen a young man who has demonstrated his leadership in many ways. It is a pleasure to hand over the mantle of office to one who is so capable. It is my hope that you will give to him the same cooperation that you have so graciously given to me during the past year.

Finally, in this coming Holiday Season, let us all pause from our busy lives and rededicate ourselves to those humanitarian principles that have been so well taught to us by Him whose birthday we celebrate this month.

I wish each and every one of you A MERRY CHRISTMAS AND A HAPPY NEW YEAR.

Thomas G. Reed.

President.

West Virginia Medical Journal

Official Journal of

The West Virginia State Medical Association
302 Atlas Building, Charleston, West Virginia

Editor

Walter E. Vest, M. D. (1951) ..... Huntington

Managing Editor

Mr. Charles Lively ..... Charleston

Associate Editors

Edward J. Van Liere, M. D. (1950) ..... Morgantown
G. G. Irwin, M. D. (1952) ..... Charleston
R. H. Edwards, M. D. (1953) ..... Welch
W. M. Sheppe, M. D. (1954) ..... Wheeling

Editor Emeritus

James R. Blass, M. D. ..... Huntington

Business Manager

Mr. Charles Lively ..... Charleston

Published monthly on the first day of the month, at Charleston, by The West Virginia State Medical Association.

Original articles are accepted on condition that they are contributed exclusively to the Journal.

Advertising rates furnished upon request. All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the American Medical Association.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston 24, West Virginia. Telephone, Capitol 34-625.

RABIES IN WEST VIRGINIA

A ten-year old boy died of rabies in Kanawha County on October 27, 1949. Seventeen days before his death, the child was bitten on the hand by his pet dog. The dog showed symptoms suggestive of rabies, and two days later, upon examination of the brain by the State Hygienic Laboratory, typical Negri bodies pathogenic of rabies were found. The boy's physician immediately began vaccine treatment, but twelve days later the child was hospitalized and died within two days. Four physicians, one a brain specialist, stated the symptoms presented the classic picture of rabies. Autopsy could not be obtained.

The Semple type (phenolized) vaccine used had shown by the standard Habel potency test the ability to protect mice against 100,000 M.L.D. of rabies virus, one hundred-fold greater potency than required for human vaccines by the National Institute of Health. Because the boy had a previously existing lesion on his nose which his pet may have licked several days before the actual bite, the attending physician suggested the probability of infection considerably before the first injection of vaccine. Apparently the virus introduced by the dog's saliva obtained so strong a foothold before initiation of vaccine that the vaccine could not combat the disease. The fourteenth vial of vaccine, not used because of the boy's death, was obtained by the State Hygienic Laboratory and tested for safety by massive intracerebral inoculation into white mice, with the fortunate result that the mice remain healthy as of this date (November 17, 1949).

This case emphasizes the distressing rabies situation in West Virginia. The State Hygienic Laboratory examines all animal heads suspected of rabies in our state. The laboratory reports that in the decade from 1939 through 1948 the brains of over 2100 dogs and other animals have been examined, and that over a thousand (49 per cent) have proved positive by microscopic examination and animal tests. During this period, the highest incidence of positive findings was in 1939 and 1940, when the positive per cent was 60.5, and when there were eight human deaths certified with rabies as the cause. These deaths occurred in Kanawha, Cabell, Raleigh, Clay, Harrison, Summers and Marshall counties.

Following sporadic localized efforts at control of the dog population, the positive incidence among suspected animals dropped to 32.7 per cent in 1948. Since then, with relaxed control, the incidence in animals has increased, reaching about 50 percent of almost four hundred heads examined in the first ten months of 1949. Also, during these ten months 136 complete human vaccine treatments have been distributed on requests of physicians by the State Hygienic Laboratory alone, more treatments than the total distributed in the previous three years. There have been no reports of ill effects from 400 vaccine treatments distributed since January 1, 1944.

The high per cent of positive laboratory results is indeed a danger signal which shows that rabies is increasing throughout the state, and to such an extent that wild animals also are now frequently proven by laboratory examination to be rabid. A high human death rate is almost surely a corollary to high incidence in animals.

In the past decade, there have been in West Virginia eighteen human deaths from rabies recorded on death certificates, six per cent of the total reported in the United States for the same period, although our population is only about 1.3 per cent of the total population of the United States.

When a person is bitten by an animal which may have rabies, very frequently the animal is killed immediately without waiting for it to develop clinical symptoms. This almost always loses time in establishing the diagnosis, for, though typical Negri bodies can almost always

be demonstrated in the brain of an animal dying of rabies, they are seldom found before clinical symptoms have developed, and often not unless the animal is allowed to live three or more days after onset of symptoms. Thus, if the microscopic examination of a suspected animal is negative, it is necessary to inoculate laboratory animals to establish the diagnosis. This often delays the diagnosis an additional two or more weeks. The State Hygienic Laboratory furnishes upon request full instructions concerning the most rapid procedure for obtaining a conclusive laboratory report on a suspected rabid animal. There is no charge for the laboratory examination.

Recent well-substantiated research[1] proved that when deep lacerated wounds into which lethal quantities of rabies virus is rubbed are flushed with 20 per cent liquid green soap, even after two hours, the attack rate is markedly reduced. This treatment proved fully as effective as the traditional cautery with nitric acid, and much more so than application of iodine. Other ordinary disinfectants, such as mercury, phenol or the sulfonamides, have little or no beneficial effect.

The circumstances under which human antirabic vaccine should be administered are outlined in *Immunization Procedures Recommended by the West Virginia State Health Department*, copies of which may be obtained by physicians upon request. Full discussion may be found in Anderson & Arnstein's *Communicable Disease Control*, 1948, and in Rivers' *Viral & Reckettsial Infections of Man*, J. Lippincott Co., 1948.

Although it is well recognized that human antirabic vaccine should never be given indiscriminately because of the chance of postvaccinal encephalitis, recent advances in making commercial vaccines more potent and somewhat purer appear to have decreased the incidence of vaccinal encephalitis to about one chance in 6,000 or more, according to published statistics. This incidence was reported for 1948 on something over 6,000 vaccine treatments administered.

The attack rate of human rabies, a 100 per cent fatal disease when vaccine is not administered, is much higher. From 1939 to 1946, 800 people in New York State[2] were bitten by proven rabid animals. Of these, 781 people were treated with vaccine and none developed the disease. But of the 19 who did not receive antirabic treatment, two died of rabies, the only human rabies deaths in New York during that period.

It is noteworthy that this report also lists 399 persons in contact with but not bitten by proved rabid dogs who were not immunized but did not develop the disease, showing a very low attack rate from this type of exposure. Eight hundred ninety other persons exposed but not bitten did receive vaccine, with no subsequent ill effects.

West Virginia has annually about 6 per cent of the human deaths from rabies reported in the United States. We stand nineteenth from the top among states in proven cases of rabies among animals. Almost all the states which exceed us have a much greater population. Certainly, then, the situation in West Virginia is sufficiently serious to require concerted action by medical and health authorities toward control and immunization of the dog population so that this dreadful disease may be stamped out at its source.

REFERENCES

1. Shaughnessy and Zichis: J.A.M.A., 123, 9:528, 1943.
2. Korns and Zeissig: Am. J.P.H., 38:50, 1948.

A "FIRST" FOR THE STATE PTA

The West Virginia Congress of Parents and Teachers, at its annual meeting in Huntington on October 21, 1949, took an advanced stand on health matters. This organization, which gets down to the real "grass roots" in our community life, adopted a strong resolution opposing any form of socialized medicine, the first such resolution to be adopted by any state PTA group.

This is one of the most forward-looking resolutions we have seen emanating from any community welfare organization. These citizens certainly realize that only by all health betterment agencies working together can good general health be attained.

The State PTA group understands the danger of compulsory health insurance, and especially the danger of introducing the element compulsion into the daily living of individuals who constitute what has hitherto been a free society. They probably know that in England the "contribution" from the recipients of "free" medical care amounts to only 12 per cent of the total cost, the remaining 88 per cent coming from other tax sources, most of which derives from the rank and file of the general populace.

Again, thank you, PTA.

CHRISTMAS SEAL TIME

Proceeds realized from the sale of Christmas Seals in West Virginia during the past few years has made possible the purchases of needed X-ray equipment to further the tuberculosis case-finding program in this state. These funds have

also been used to purchase motion picture projectors, screens and films for an extensive statewide educational campaign with reference to ways to find, prevent and cure tuberculosis.

X-ray surveys conducted by the USPHS from January, 1942, to the summer of 1946 showed that 24,000 persons who thought they were healthy were infected with tuberculosis. Approximately one-third of these people had active cases of the disease. In other words they could infect others.

It is recognized that there are still many people among the aparently well population who have active tuberculosis. It is the aim of the various chapters of the West Virginia Tuberculosis and Health Association to fight these cases so that treatment may be begun immediately and thus make a cure more certain, and at the same time protect the uninfected persons in the various communities.

We hope that the members of the West Virginia State Medical Association will go all out in their support of the Christmas Seal program now being conducted in every city, town and village in West Virginia.

A STRAW IN THE MEDICAL WIND

We extend to the officers and members of the State and Territorial Health Officers' Conference heartiest congratulations upon the adoption of a strong resolution opposing any form of socialized medicine. This group is composed of health officers representing every state and territory of the United States.

It is significant that the action of the group in adopting the resolution expressing disapproval of compulsory health insurance came after an address delivered by Honorable Oscar R. Ewing, Administrator of the Federal Security Agency, who is a strong advocate of this type of legislation.

SOME PRO, SOME CON

The column as a specific form of literature has come into its own in the modern American press, and, in fact, has practically become a part of our daily life.

This type of literature would seem to be a lineal descendant of the Spectator in England and Federalist in America. The writers discuss everything under the sun, often in a philosophical vein. A goodly number of them have discussed socialized medicine, some pro and some con.

One of the most interesting, and incidentally one of the most understanding and sensible of these discussions has recently come from the pen of Mr. George E. Sokolsky under the headline, "Confused Thinking of Some Medics." He lists three groups of doctors who favor socialized medicine, using the indefinite numeral "many" in referring to those physicians who favor compulsory sickness insurance.

We do not believe the term "many" is correct. In fact, we know of only one physician in West Virginia who favors compulsory sickness insurance, and he has never been very active in practice.

Furthermore, we have information to the effect that only four per cent of the doctors in the entire United States might be considered as favorable to the socialization of the profession.

When we consider the fact that eight and a third per cent of Christ's disciples betrayed him, medicine's showing does not seem too bad.

The classification Mr. Sokolsky makes of those who espouse the cause of compulsory sickness insurance, euphemistically denominated "health insurance" by the socialistically minded uplifters in Washington, is entirely correct.

The first class is that group of doctors who live "under an umbrella" as it were, financially. In this group he places teachers of medicine who rarely do much practice, and public officials. Some of these individuals do actually favor state medicine, but our own observation gives us the impression that the great majority are opposed to it, and go along with the overwhelming majority of the medical profession who bitterly oppose socialization.

His second pigeon hole contains the medical ne'er-do-wells, the lazy, and the failures who feel that they would be better off pecuniarily socialized than as free practicioners.

The third includes the doctors who are really Marxists and want to socialize everything. With these, he includes the "innocents" who follow the Marxist leaders. We would have used the term "ignoramuses" had we been naming this segment of the profession.

Mr. Sokolsky hits the nail squarely on the head when he lists the reasons why physicians abhor state medicine: (1) enslavement of a noble and altrustic profession, and (2) the fact the experience in other countries has shown that socialization slows down advancement of medical progress and results in deterioration of medical service. Likewise, he suggests that doctors get busy in politics and show their power at the polls.

Our hats are off to you, Mr. Sokolsky, for a very forthright and convincing article on our medical needs in America, and especially for your stand against socialized medicine.

GENERAL NEWS

COUNCIL ACCEPTS AMENDMENTS TO FEE SCHEDULE FOR VETERANS CARE

Amendments to the fee schedule for the care of veterans, affecting psychiatric and neurological examinations and treatments, have been approved by the Veterans Administration and the Council of the West Virginia State Medical Association. The amendments are effective December 1, 1949.

Certain items appearing on page 10 of the fee schedule are amended as follows:

Revised Schedule

0039 —Psychiatric examination (first hour or less)	$10.00
0039A—Major portion of each additional half-hour	5.00
0040 —Neurological examination (first hour or less)	10.00
0040A—Major portion of each additional half-hour	5.00
0053 —Psychiatric treatment up to first half-hour	5.00
0053A—Major portion of each additional half-hour	5.00
0054 —Neurological treatment up to first half-hour	5.00
0054A—Major portion of each additional half-hour	5.00

These same items in the old fee schedule were as follows:

Old Schedule

0039 —Psychiatric examination—One hour (50-60 minutes)	$10.00
0039A—Each half-hour (25-30 minutes additional to original 60-minute hour	5.00
0040 —Neurological examination—One Hour (50-60 minutes)	10.00
0040A—Each half-hour (25-30 minutes) additional to original 60-minute hour	5.00
0053 —Psychiatric treatment (psychotherapeutic conference) One hour (50-60 minutes)	10.00
0053A—One-half hour (25-30 minutes)	5.00
0054 —Neurological treatment (treatment is understood to be the usual follow-up care and observation after diagnosis has been made at original neurological examination)—One Hour (50-60 minutes)	10.00
0054A—One-half hour (25-30 minutes)	5.00

Occupational and Physical Therapy

The proposed amendments were approved by the Veterans Board of Review and agreed to by the Council and the Veterans Administration.

Another amendment to the fee schedule was approved by the Council at the pre-convention meeting held at White Sulphur Springs, August 5, 1949. At the request of the veterans administration the note under "Occupational Therapy and Physiotherapy", at the top of page 26 of the printed fee schedule, was amended by deleting the last sentence in the first paragraph, so that the note will read as follows:

"NOTE: Physical therapy and occupational therapy are understood to be treatment rendered by physicians practicing in the field of physical medicine or by physical therapists or occupational therapists who render such treatment on a prescription basis under the director of physicians."

The sentence deleted from the fee schedule is as follows:

"Authorization for physical therapy and occupational therapy will be issued only to physicians who will in relevant cases pay the physical or occupational therapists."

This amendment to the fee schedule was also agreed to by the Council after its approval by the Veterans Board of Review.

MLB LICENSES 38 DOCTORS

At the fall meeting of the Medical Licensing Board, held at the Capitol, in Charleston, October 6, 1949, 38 doctors were licensed to practice medicine in this state, 15 by direct examination, and 23 by reciprocity with other states.

The following is a list of the doctors licensed by direct examination:

Ashcraft, John Randolph, Holden
Atkinson, Robert Cain, Gary
Brown, Lee Buckingham, Gary
Brown, Robert Ray, Romney
Burnett, Quinter Milton, Whitesville
Galamaga, Peter, McComas
Kelly, Alexander Joseph, Jr., Bishop, Virginia
Lemon, George Lawton, Lewisburg
Lynch, Richard Vance, Clarksburg
Madison, Mitchell Stanley, Beards Fork
Meaney, Richard Vincent, Beckley
Shafer, William Albert, Bluefield
Sproles, John Hammitt, Pocahontas, Virginia
Wallace, Richard Custer, St. Albans
Walthall, Joseph Emmett, III, Athens

The following doctors were licensed by reciprocity:

Alphin, Thomas Henry, Charlottesville, Virginia
Bell, Julius William, Parkersburg
Combs, Robert Gerald, Bluefield
Copenhaver, William Edward, Bluefield
Corton, Richard Van Metre, Elkins
Duffey, George Wallace, Thomas
Evans, Alford Glen, Fairmont
Fischer, Herman, Clarksburg
Gardner, Charles Kurtin, Oak Hill
Guerrant, John Summerfield, Madison
Harvey, David Clifford, Delbarton
Hyer, Harry Jackson, Huntington
Jackson, Richard DeWitt, Welch
Lighthizer, Charles William, Steubenville, Ohio
Mullins, David Walker, Logan
Nicgorski, Eugene John, Filbert
Powell, Rupert Wendell, Fairmont
Ross, John Edward, Jr., Iaeger
Salton, Russell Arthur, Jr., Williamson
Silipo, Anthony Alfred, Prenter
Smith, Robert Elton, Parsons
Valentine, E. Henry, Glenalum
Wiestling, Helen Merwin, Wheeling

The winter meeting of the Medical Licensing Board will be held at Charleston, January 5-7, 1950.

DR. ROBT. J. WILKINSON ELECTED FIRST VICE PRESIDENT OF SOUTHERN MEDICAL

Dr. R. J. Wilkinson, of Huntington, a past president of the West Virginia State Medical Association, was elected first vice president of the Southern Medical Association at the annual meeting held in Cincinnati November 14-17, 1949. He succeeds Dr. Curtice Rosser, of Dallas, Texas, who was named president elect.

Dr. Hamilton W. McKay, of Charlotte, North Carolina, succeeds Dr. Oscar B. Hunter, of Washington, D. C., as president.

Dr. H. A. Swart, of Charleston, was elected vice chairman of the Section on Orthopedic and Traumatic Surgery. He succeeds Dr. C. C. Irwin, of Warm Springs, Georgia, who was elected chairman of the section.

The Council was authorized to set up two special committees, one to make a study of medical education as it affects the south, and the other to make a complete study of hospital-medical relations.

An interesting scientific program was presented, covering subjects in every field of medicine and surgery. The list of guest speakers included names of doctors prominent in their particular specialty fields.

Nearly 40 scientific exhibits were arranged, including one by Dr. Archibald P. Hudgins, of Charleston, the subject being, "Early Ambulation and Perineal Care: Obstetrical and Gynecological Questionnaire Reports." Over 50 technical exhibits were set up at the Netherland Plaza, the headquarters hotel.

Dr. Andrew E. Amick, of Lewisburg, attended the meeting as a member of the Council, and Dr. James J. Brandabur, of Huntington, secretary of the section on Industrial Medicine and Surgery, was also present.

The 1950 meeting of the Association will be held in St. Louis.

SOUTHERN MEDICAL AUXILIARY

The 25th annual meeting of the Woman's Auxiliary to the Southern Medical Association, was held at Cincinnati November 14-17, conjointly with the meeting of the Southern Medical Association.

Mrs. V. Eugene Holcombe, of Charleston, past president of the Woman's Auxiliary to the American Medical Association, and Doctor's Day chairman, gave the invocation at the breakfast meeting of the executive board on Tuesday, November 15.

Mrs. U. G. McClure, of Charleston, second vice president of the Southern Medical Auxiliary, and Mrs. Ralph S. McLaughlin, of that city, a member of the Council, also attended the meeting at Cincinnati.

DOCTOR WRIGHT NAMED ACS DIRECTOR

Dr. Chauncey B. Wright, of Huntington, has been elected a director of the American Cancer Society for the unexpired term of the late Russell B. Bailey, M. D., of Wheeling.

Doctor Wright, who was just recently elected president of the West Virginia Cancer Society to succeed Doctor Bailey, will represent Region No. 2 comprising the states of New Jersey, Pennsylvania, Delaware, Maryland, District of Columbia, Ohio and West Virginia.

WEST VIRGINIA DOCTORS ON PROGRAM AT SECRETARIES-EDITORS MEETING

Two West Virginia doctors appeared on the program at the annual Conference of State Medical Association Secretaries and Editors, which was held in Chicago, November 3-4.

Dr. Frank J. Holroyd, of Princeton, chairman of the public relations committee of the West Virginia State Medical Association and state and area chairman for the National Conference of County Medical Society Officers, was the first speaker on the program Thursday morning, November 3. His subect was, "Making A Speakers Bureau Fulfill Its Purpose." His paper was discussed by several doctors present at the meeting.

Dr. Walter E. Vest, of Huntington, editor of the West Virginia Medical Journal and delegate to the AMA House of Delegates, was one of the guest speakers at the banquet at the Bismarck Hotel, Thursday evening, November 3.

The program for the banquet followed somewhat the pattern used by the Gridiron Club at its annual dinners in Washington.

Doctor Vest's subject was "What's Wrong with Medical Society Secretaries?", and he was followed by Dr. Walter P. Anderton, of New York City, secretary of the Medical Society of the State of New York, whose subject was "What's Wrong with Medical Editors?"

Several speakers stressed the need for continued work in the medical public relations field, and full reports were submitted concerning the AMA Educational compaign.

One of the highlights of the meeting was the appearance on the program of Mr. John W. McPherrin, of New York City, editor of the American Druggist. His subject was, "The British National Health Service: Results to Date." Mr. McPherrin discussed a second visit he made recently to England, where he made tape recordings of interviews with people in every walk of life in that country.

He said that for the most part doctors in that country who had previously enjoyed a mediocre practice were very well pleased with their participation in the National Health Service Program, as it meant many additional patients for them and enabled them to bring their practice up to their more successful confreres.

Mr. McPherrin reported that there was still general dissatisfaction among doctors who had enjoyed a successful practice for the reason that, under the new service regulations, they were compelled to practice "assembly line medicine," which resulted in a great increase in prescriptions, and enmeshed them in government red tape under which they are of necessity compelled to lose much valuable time from their practice in filling out innumerable forms and reports.

Most of the editors and state secretaries present at the meeting remained over for the second annual Public Relations Conference, which was held at the AMA Building, Saturday and Sunday, Nov. 5-6.

Besides Doctor Vest and Doctor Holroyd, the West Virginia State Medical Association was represented at the meeting by the executive secretary, Charles Lively.

W. VA. PTA FIRST STATE CONGRESS TO OPPOSE SOCIALIZED MEDICINE

The West Virginia Congress of Parents and Teachers is the first state PTA organization to adopt a resolution opposing socialized medicine, and a story to this effect is included in the November 7 issue of the "Secretary's Letter," mailed by Dr. George F. Lull, secretary and general manager of the American Medical Association, to groups all over the country.

The West Virginia PTA Congress represents a total membership of 85,000 and the following resolution was adopted at the 27th annual convention in Huntington, October 21, 1949:

"Accepting the definition of health of the World Health Organization as being that complete state of physical, mental and social well-being and not merely the absence of disease or infirmity, and believing it is our duty and privilege as parents and teachers to accept our community responsibility to work toward achieving this for the people of West Virginia, and believing that the best interests of the public will be served by the people in the local communities working in cooperation with the medical profession to improve our present medical, hospital and nursing facilities:

"Be It Resolved, That the West Virginia Congress of Parents and Teachers, through its state, county and local organization, cooperate with the State Health Department, the West Virginia State Medical Association and the West Virginia Rural Health Conference in their efforts to extend and improve health facilities and services in all the areas of the state, and that this Congress go on record as opposed to any form of socialized medicine."

Mrs. C. D. Ellifrits, of Elkins, is the president of the organization, and she presided at the sessions held in Huntington.

SUPPORT FROM MEDICAL-DENTAL BUREAUS

A strong resolution opposing any form of compulsory health insurance or any system of political medicine that might result in bureaucratic control was adopted by the National Association of Medical-Dental Bureaus, Inc., at the 11th annual convention at Denver, Colorado, September 21, 1949. Copies of the resolution have been mailed to President Truman and all the members of Congress.

The Physicians and Dentists Business Bureau, with offices in Charleston, Huntington, Wheeling and Beckley, is recognized by the National Association as the official collection medium and professional business bureau for Kanawha, Cabell, Ohio and Raleigh Counties.

DOCTOR NO. 1000 CERTIFIED TO VA

Dr. Edward Jackson, of St. Albans, is doctor No. 1,000 to be certified to the Veterans Administration as a fee designated physician under the West Virginia State Medical Association's veterans care program. As of November 15, 1,004 of the slightly more than 1,400 members of the Association had accepted appointment as fee-designated physicians.

AMENDED ACT PROVIDES MORE FEDERAL FUNDS FOR CONSTRUCTING HOSPITALS

The bill liberalizing the amounts of federal contributions under the Hill-Burton Hospital Construction Act, recently enacted by Congress, was signed by the President, October 25, 1949. The bill is effective immediately.

Under the provisions of the bill, federal grants to the states are increased from $75 to $150 millions annually, and the period during which allotments can be made is extended from June 30, 1950, to June 30, 1955.

One of the most important provisions of the bill is the section which permits federal contributions to as much as 66-2/3 per cent of the total construction costs of new hospitals. Under the old law, the limit of federal contributions was set at 33-1/3 per cent.

The new bill also provides for federal grants totaling $1,200,000 a year for five years for a research program looking toward coordination and improvement of hospital services. According to Surgeon General Leonard A. Scheele, 954 hospital projects had been approved as of October 1, 1949, of which 50 have been completed and are open, and approximately 400 are under construction.

Most of the projects cover small general hospitals of 50-bed or less capacity, located for the most part in small towns and rural areas. Approximately 37,000 additional hospital beds will be made available as the result of this new construction.

According to Doctor Scheele, one important aspect in planning under the new act will be to endeavor to provide better linkage between large urban and hospital centers and hospitals in smaller areas. Pioneer projects in such inter-hospital relationships are already being conducted at the Medical College of Virginia and at a few other hospitals and medical schools in the country.

The new formula for hospitals will be based on state population and relative wealth. States may choose between a uniform, state-wide rate for federal funds, which ranges from one-third to two-thirds of the total cost, or adopt a sliding scale with the formula weighted in favor of lower-income communities.

DR. JARRETT HEADS STATE HEALTH BOARD

Dr. William M. Jarrett, prominent Charleston dentist, was named chairman of the nine-member State Board of Health at a meeting held at Charleston, November 10, 1949. He will fill the unexpired term of Russell B. Bailey, M. D., of Wheeling, who died early in September.

Doctor Jarrett has practiced his specialty of orthodontics in Charleston for the past 18 years. He is a graduate of the dental school of the University of Pittsburgh.

Dr. Robert J. Reed, Jr., of Wheeling, was present at the meeting, having been appointed as a member of the Board to succeed Doctor Bailey.

The Board will hold its next meeting at Charleston, March 16, 1950.

LARGE DELEGATION OF STATE DOCTORS TO ATTEND AMA INTERIM SESSION

The annual clinical session of the AMA, which will be held December 6-9, in Washington, D. C., will be attended by a large delegation of doctors from this state. The scientific program is scheduled to begin Tuesday afternoon, December 6, and end Friday at noon.

The registration bureau will be located in the National Guard Armory, where most of the scientific sessions will be held. All meetings of the House of Delegates will be held in the Presidential ballroom at the Hotel Statler, the first session being scheduled for ten o'clock on Tuesday morning.

Dr. Walter E. Vest, of Huntington, and Dr. Ivan Fawcett, of Wheeling, will represent the West Virginia State Medical Association. Doctor Fawcett's services as a delegate from this state will end with the Washington meeting. Dr. George F. Evans, of Clarksburg, who was elected a delegate at White Sulphur Springs, will take office January 1, 1950, and will, with Doctor Vest, represent the State Medical Association at the annual meeting in San Francisco next June.

The scientific program has been arranged with a view to providing papers on various subjects of special interest to the general practitioner. Well-known doctors in every field will appear on the program, which will run continuously during the three-day meeting.

RELOCATIONS

Dr. W. Ralph Counts, of Welch, has moved to Enfield, North Carolina, where he will continue in general practice.

* * * *

Dr. E. R. Cooper, formerly of Troy, but who has recently been located at Gallipolis, Ohio, has accepted appointment as a member of the medical staff at the Spencer State Hospital.

* * * *

Dr. R. Moore Dodrill, formerly of Welch, who has recently been a member of the medical staff of the Kanawha-Charleston Health Department, has accepted appointment as health officer for District No. 4, comprising the counties of Lewis, Upshur, Calhoun, and Gilmer. He succeeds Dr. Herbert B. Wise, who has been ill for several months. His headquarters will be at Weston.

CABELL GROUP AT LILLY LABORATORIES

First row (left to right): F. M. Peck, M. D., Sidney Schnitt, M. D., Mrs. Sidney Schnitt, Mrs. W. W. Guthrie, W. W. Guthrie, M. D., W. L. Neal, M. D., L. Passarelli, M. D., C. Figueiro, M. D., A. Torres, M. D., Mrs. K. F. McKay, Mr. K. F. McKay.

Second row: N. Yast, M. D., H. F. Maguire, M. D., Mrs. E. L. Walsh, E. L. Walsh, M. D., Mrs. P. R. Copeland, P. R. Copeland, M. D., Mrs. C. S. Clay, C. S. Clay, M. D., G. O. Gomez, M. D.

Third row: G. J. Wayburn, M. D., Mrs. G. J. Wayburn, Mrs. W. J. Porter, W. J. Porter, M. D., L. J. Moore, M. D., Mrs. L. J. Moore, R. Staats, M. D., Mrs. R. Staats, Mrs. R. A. Edwards, R. A. Edwards, M. D.

Fourth row: J. W. Hunter, M. D., W. K. Yates, M. D., Mrs. W. K. Yates, Mrs. J. J. Brandabur, J. J. Brandabur, M. D., S. R. Hoover, M. D., Mrs. S. R. Hoover, N. F. Hines, M. D., Mrs. N. F. Hines, Mrs. W. C. Thomas, W. C. Thomas, M. D.

LIBRARY COLLEGE OF PHYSICIANS OF PHILADELPHIA

SECOND ANNUAL PR CONFERENCE

The second annual PR conference sponsored by the AMA was held in Chicago, November 5-6, immediately following the annual conference of Secretaries and Editors.

The program, which was arranged by Lawrence W. Rember, AMA public relations director, and members of his staff, included worthwhile papers presented by doctors and laymen prominent in the PR field.

The matter of public relations was discussed upon county, state and national levels, and a full report was rendered concerning the results of the National Educational Campaign.

Mr. Leonard E. Read, president of the Foundation for Economic Education, was one of the guest speakers at the banquet. His subject was, "Selling Liberty: A Public Relations Project for Every American."

Dr. Ernest E. Irons, president of the American Medical Association, presented a paper on "The Profession and Public Relations." Dr. Louis Bauer, chairman of the AMA Board of Trustees, was the toastmaster.

At the closing luncheon on Sunday, November 6, Dr. Elmer L. Henderson, president elect of the AMA, was toastmaster. The principal address was delivered by Mr. Averell Broughton, president of the Public Relations Society of America, whose subject was "Public Relations is Our Business."

ACS CONFERS FELLOWSHIPS

At the closing of the 35th annual Clinical Congress of the American College of Surgeons, at Cleveland, October 21, over 900 initiates were received into fellowship. The following West Virginia doctors were among the initiates: Edwin O. Daue, Jr., Beckley; O. D. MacCallum, Madison; Kenneth G. MacDonald, Charleston; Paul L. McCuskey, Parkersburg; Charles M. Scott, Bluefield; and M. Lawrence White, Jr., Huntington.

The fellowships were conferred by the president of the college, Dr. Frederick A. Coller, of Ann Arbor, Michigan. The Fellowship Address was delivered by Lord Webb-Johnson, of London, England, immediate past president of the Royal College of Surgeons, and an honorary fellow of the American College.

It was reported at the Cleveland meeting that there are now over 15,000 fellows of the ACS. The Congress was organized in 1913 for the purpose of elevating the standards of surgery. One of its best known activities is hospital standardization. Over 3,000 hospitals were on the approved list which was published in January, 1949.

HEALTH OFFICERS REAPPOINTED

The following full-time health officers in West Virginia were reappointed by the State Board of Health at the fall meeting held October 12, in Charleston:

Dr. L. A. Dickerson, Kanawha-Charleston Health Department, Charleston; Dr. Luke Frame, Cabell-Huntington-Wayne Health Department, Huntington; Dr. M. A. Viggiano, Wetzel County; and Dr. Herbert T. Marshall, Jefferson and Berkeley counties.

Part-time county health officers were appointed as follows: Dr. A. A. Smith, Clay; Dr. H. A. Hancock, Monroe; Dr. E. S. Brown, Nicholas; Dr. L. O. Schwartz, Brooke; and Dr. J. M. Coram, Raleigh.

DR. DYER HONORED BY HEALTH CONFERENCE

At the recent annual conference of State and Territorial Health Officers, held in Washington, D. C., the following resolution expressing disapproval of the proposed public health insurance legislation was adopted:

"WHEREAS, it is generally recognized that the people of the United States now enjoy the highest standards of health of any country in the world; and,

"WHEREAS, the progress in preventive medicine, protective sanitation against environmental hazards, proper public health education and organized public health service with qualified personnel has been one of the principal factors in accomplishing those results; and,

"WHEREAS, the pending legislation on compulsory health insurance does not include adequate provisions for preventive medicine and the future development of modern public health service:

"THEREFORE, BE IT RESOLVED, That the Association of State and Territorial Health Officers hereby expresses its disapproval of the proposed compulsory health insurance legislation now being considered."

Dr. N. H. Dyer, State Director of Health, who represented West Virginia at the meeting and served as a member of the committee on Maternal and Child Health, was elected a member of the executive committee of the conference to serve during the ensuing year. The committee is composed of the officers and four members of the conference.

SOUTHEASTERN ALLERGY ASSOCIATION

The 5th annual meeting of the Southeastern Allergy Association will be held at the Columbia Hotel, in Columbia, South Carolina, February 11-12, 1950. Speakers on the program will include Dr. Jonathan Forman, president of the American College of Allergists, and Dr. Theodore Squire, president elect of the American Academy of Allergy. A panel discussion on "Pediatric Allergy" will be led by Dr. Lewis Hoppe, of Atlanta, and Dr. Warrick Thomas, of Richmond, Virginia, will serve as coordinator for a panel on "Office Procedure."

Room reservations may be made directly with the Columbia Hotel. Doctors who expect to attend the meeting should notify the secretary of the SAA, Dr. Katharine B. MacInnis, 1515 Bull St., Columbia, S. C.

OB. AND GYN. CONGRESS TO MEET

The International and Fourth American Congress on Obstetrics and Gnyecology will be held at the Hotel Statler, New York City, May 14-19, 1950. Dr. Howard C. Taylor, Jr., of that city, has been named chairman of the general program committee.

Speakers prominent in the field of obstetrics and gynecology will appear during the five morning general sessions, and other prominent doctors will take part in the afternoon programs of the medical section of the Congress being arranged by a sub-committee headed by Dr. Newell Philpott, of Montreal.

Full information concerning registration and room reservations may be obtained by writing to Dr. Fred L. Adair, 161 East Erie Street, Chicago 11, Illinois.

HOSPITAL ADMINISTRATION SCHOOL AT MCV

A school of hospital administration, the first to be organized in Virginia, has been established at the Medical College of Virginia, in Richmond, and instruction will begin January 2, 1950.

Mr. C. P. Cardwell, Jr., director of the hospital division of the college, will serve as professor of hospital administration. Mr. A. J. Howell, former administrator of Raiford Memorial Hospital at Franklin, Virgmia, has been named as an associate professor and director of the school. Individual lecturers who are authorities in their respective fields will be called upon to conduct some course in the curriculum.

The course will consist of 18 months' training, the first six months of which will be devoted to introductory classroom instruction with ample opportunity to observe hospital administration and operation. During the second period of 12 months, the course will take the form of an internship, a part of which will be provided at the hospital division of the college and the remainder in smaller hospitals.

Applicants must have a baccalaureate degree from an educational institution approved by the MCV and must show evidence of possessing capability and fitness for work in hospital administration.

Information and application forms for admission to the new school may be obtained from the director, A. J. Howell, Medical College of Virginia, Richmond.

GROUP VISITS ELI LILLY AND COMPANY

Members of the Cabell County Medical Society were the guests of Eli Lilly and Company at their Laboratories, in Indianapolis, Indiana, October 23-25.

While they were in Indianapolis, the guests made a thorough inspection of the Lilly Laboratories, including the Research Laboratories, a replica of the original laboratories, and the Biological Laboratories at Greenfield, Indiana, where demonstrations were made showing the production of biological products.

The Cabell delegation was composed of forty-two doctors and their wives, and the trip to Indianapolis was made by special pullman attached to a regular C. & O. train.

Those who made the trip report a most interesting visit at the Lilly Laboratories, where a full three-day program had been arranged by the company's Professional Relations Department, of which Mr. A. E. Stensby is the manager.

PLEASE CHECK ROSTER

The annual roster of members of component societies is printed in this issue of The Journal, beginning on page 357. All members are requested to check the roster carefully. Any errors in names or addresses should be reported immediately to the headquarters offices of the West Virginia State Medical Association, Box 1031, Charleston 24, West Virginia, so that corrections may be made before the roster is printed in pamphlet form to be distributed to officers of component societies.

LOW PRENATAL SEROLOGIC TESTING

A sharp drop in the number of cases of primary and secondary syphilis for the first six months of 1949 is apparent from figures compiled by the State Health Department. A total of 502 cases have been reported for this period in 1949 as compared with 707 in 1948.

State Health Department officials report continued laxity among physicians in securing serologic tests during pregnancy. A study made by the Department of certificates of births occurring for the first three months of 1949 indicates that of the 10,796 live births reported, 1168, or 10.8 per cent, reported no serologic tests.

The study also revealed that the omission of serologic tests during pregnancy was predominate in home deliveries in rural areas as well as in the lower income groups in urban areas. Where the incidence of venereal diseases is high, it has been found that the level of prenatal serologic testing is low.

"GRASS ROOTS" CONFERENCE

The 6th National "Grass Roots" Conference will be held Thursday evening, December 8, at the Hotel Statler, in Washington, during the Interim session of the American Medical Association in that city.

The theme for the conference will be "Community Health Leadership," and the following speakers will appear on the program: Dr. A. L. Tuuri, Medical Director, Mott Children's Center, Flint, Michigan; Dr. Roy L. Scott, President, Medical Society, County of Erie, Buffalo, N. Y.; George N. Craig, Brazil, Indiana, National Commander of the American Legion; Dr. Warren F. Draper, Executive Medical Officer, Welfare and Retirement Fund, United Mine Workers of America, Washington; and Dr. Joseph Wall, Past President, District of Columbia Medical Society, Washington.

Dr. A. M. Mitchell, of Terre Haute, Indiana, is chairman of the committee on arrangements. Dr. Frank J. Holroyd, of Princeton, is state and area chairman of the conference.

An invitation to attend the conference has been extended to the doctors and their wives who will be in Washington at that time for the AMA Clinical Session.

COOK COUNTY SCHOOL NAMES COMPTROLLER

The Cook County Graduate School of Medicine, 427 South Honore Street, Chicago, Illinois, has announced the appointment of John W. Neal as comptroller and assistant registrar.

Mr. Neal, who is the son of the late John R. Neal, M. D., Dean of the School at the time of his death, is a graduate of Northwestern University School of Law. He has been engaged in practice in Chicago for the past eleven years, and is a member of the Chicago, Illinois State, and American Bar Associations. He is general Counsel for the Illinois State Medical Association and executive secretary of its committee on medical service and public relations.

ANGER THE YARDSTICK

The size of a man can be measured by the size of the thing that makes him angry.—J. K. Morley.

DEAN DAVIDSON TO ASSIST IN MEDICAL-DENTAL SCHOOL SURVEY

Dr. Wilburt C. Davidson, dean of Duke University School of Medicine, has been selected by the Legislative Interim Committee studying the advisability of the creation of a four-year school of medicine and dentistry in this state to make an independent study of the problem. A similar study will be made by Dr. Herman G. Weiskotten, dean of Syracuse University College of Medicine.

Selection of the two deans was made by the Legislative Interim Committee under authority of the resolution setting up the committee, adopted at the regular session of the Legislature early in 1949. It is expected that the two surveys will begin shortly after the first of the year.

Announcement of the selection of Doctor Davidson was made late in November by Senate President W. Broughton Johnston, of Princeton, who explained that Dr. Alan A. Gregg, director of medical science for the Rockefeller Foundation, who had previously been asked to make a separate survey, had found it impossible to accept the assignment. Senator Johnston and House speaker W. E. Flannery are co-chairmen of the committee.

The two separate surveys will be submitted for consideration by the Legislative Interim Committee, as well as the Advisory Committee appointed by Governor Okey L. Patteson in July 1949. The Interim Committee is directed under the provisions of the resolution to make report to the Legislature at its regular session in 1951.

VITAL STATISTICS REPORT

The health picture for West Virginia at the three-quarter mark in 1949 is most encouraging.

At the present rate, for the first time in the history of the state, the mortality rate in childbirth will be less than one woman in a thousand. The provisional rate for 1949, as fixed by the Division of Vital Statistics of the State Health Department, is .92 deaths per 1,000 live births.

There has been a steady decrease in maternal mortality since 1933 when the death rate from maternal causes was 5.7 deaths per 1,000 live births.

Among the more common communicable diseases, only seven deaths from measles were recorded for the first nine months this year, as against 31 for the same period in 1948. Diphtheria caused but three deaths, as compared with eleven during the first nine months of 1948.

Deaths from poliomyelitis doubled this year, with 14 being reported through September. The total number of cases, 293, compares with 130 for the same period in 1948.

Diarrhea and enteritis continue to show a marked increase over 1948. The 76 deaths reported for September brought the total to 194 for 1949. This is an increase of 88 percent over last year, when 31 deaths were reported in September, and 103 for the first nine months.

MANKIND'S MONSTROUS MEDICAL MENACE

From time immemorial, the human race has undoubtedly been afflicted with cancer. The assertion that one-seventh of deaths in the United States result from cancer and that an equal number of our people are afflicted with this disease demonstrates it is an unequaled universal affliction.

Within the knowledge of living physicians, medical scientific research has revealed an impressive amount of knowledge concerning this appalling malady. The most important information thus far deals with diagnosis, resulting from established methods of recognizing its presence in earlier stages than previously were available.

Why a normal cell should be apparently spontaneously converted into malignancy has never yet been revealed. Once established, however, its transmission to other parts of the body is clearly understandable. This early diagnosis renders possible the only known curative treatment through surgery, roentgenism and application of radium. Recovery without application of some of these measures has occasionally been asserted which was probably spontaneous, regardless of treatment applied.

Probably the solution of the mysteries of no other disease has ben pursued with as great expenditures of money and efforts of more individuals than has been applied to solve the unknown factors of the cause, progress and treatment of cancer. At the present time, predictions are ventured that some of these unkown and much-sought facts may be solved by the efforts of a multitude of research works. Judging from past experiences, however, one must be cautious about placing too much early expectations on reports of these investigations, in view of the many failures of predictions in past years.

The whole world awaits the solution of these mysteries which would be one of the greatest blessings which might come to mankind.—Northwest Medicine.

53,000,000 CHRISTMAS SEALS MAILED

During the week beginning November 21, local chapters of the West Virginia Tuberculosis and Health Association mailed out over 53,000,000 Christmas Seals. These went to West Virginia citizens with the request that they purchase the seals and thus aid in the fight against tuberculosis.

The annual Christmas Seal contributions provide the sole support for programs of tuberculosis societies and associations. No funds are available for their operation from any other organization or agency.

The design for the 1949 Christmas Seal, featuring a modernistic interpretation of a dove in flight and traditional holly, won a $1,000 prize in a nation-wide contest sponsored by the Society of Illustrators. The original of the Seal was drawn by a youthful German-born artist, Herbert Meyers, a recent graduate of Pratt Institute, who will use the prize money to further his training in commercial art.

Young Meyers was born in Wiesbaden, Germany, son of an American father and a German mother. He was a refugee from Nazi Germany, and served with the Eighth American Air Force during World War II.

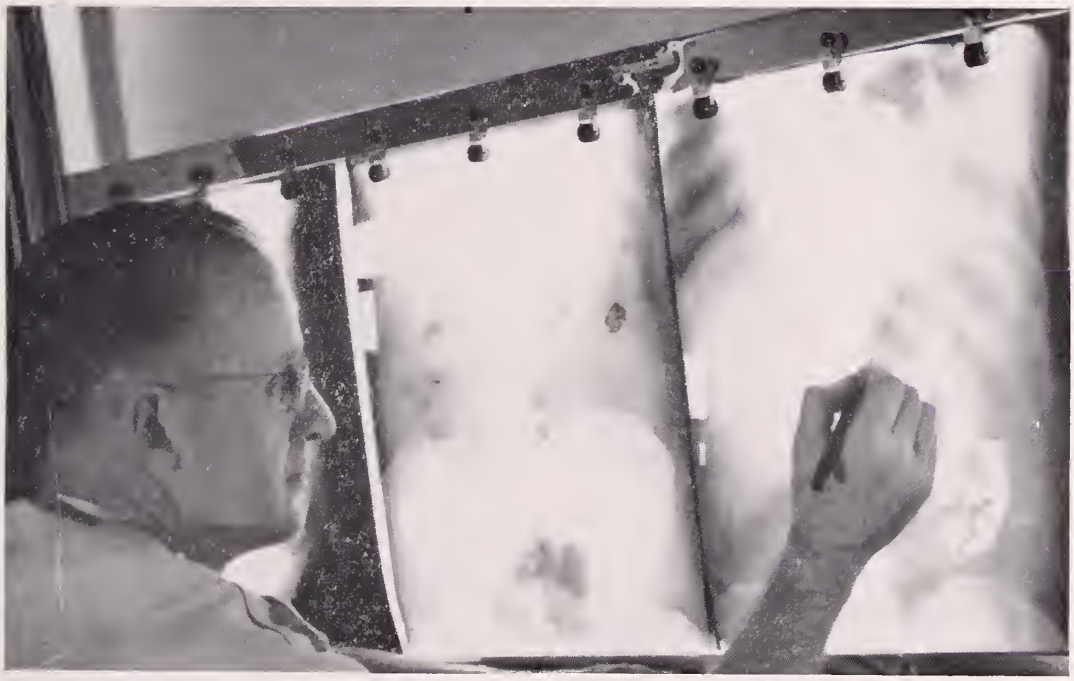
Radiopaque diagnostic medium . . .
Original development of Searle research

Iodochlorol®

BRAND OF CHLORIODIZED OIL

now council accepted

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION



Clear visualization of body cavities—for the roentgen investigation of pathologic disorders involving sinuses . . . bronchial tree . . . uterus . . . fallopian tubes . . . fistulas . . . soft tissue sinuses . . . genitourinary tract . . . empyemic cavities.

Iodochlorol is notably free from irritation, free-flowing, highly stable and has pronounced radiopaque qualities. It contains the two halogens, iodine, 27 per cent, and chlorine, 7.5 per cent, organically combined with a highly refined peanut oil.

Iodochlorol is available in bottles containing 20 cc. of the radiopaque medium; each one is packed in an individual carton. G. D. Searle & Co., Chicago 80, Illinois.

Searle

RESEARCH IN THE SERVICE OF MEDICINE

OBITUARIES

SAMUEL B. JOHNSON, M. D.

Dr. Samuel B. Johnson, 82, of Franklin, died November 8, 1949, at his home in that city, following a heart attack. He had practiced medicine in the Franklin area for 56 years.

Doctor Johnson was born at Franklin, September 6, 1867, a son of the late Dr. and Mrs. John D. Johnson. He received his M. D. degree at the University of Maryland School of Medicine in 1892, and was licensed to practice in West Virginia in 1893. He located at Franklin, that year, and practiced continuously there until his death. His father was a practicing physician in the Franklin area for over fifty years.

Doctor Johnson was a member of the Potomac Valley Medical Society, the West Virginia State Medical Association, and the American Medical Association. Besides his widow, he is survived by a son, E. S. Johnson, of Franklin, and two daughters, Cornelia Johnson, of Franklin, and Mrs. J. L. Mitchell, of Lansing, Michigan.

* * * *

FRANK LUTHER McNEER, M. D.

Dr. Frank Luther McNeer, 62, of Hinton, died October 24, at his home in that city following an extended illness. He had been in a critical condition for several weeks.

Doctor McNeer was born at Marie, son of Richard and Elizabeth Jane McNeer. He received his early education in the public schools of Summers county and in 1911 graduated head of his class at Baltimore Medical College, Baltimore, Maryland.

He was licensed to practice medicine in West Virginia in 1911 and located at Green Sulphur Springs. Subsequently he practiced at Forest Hill and in Hinton, and then located at Roanoke, Virginia, where he practiced his specialty of EENT until 1932, when he returned to Hinton. He remained in active practice there until his forced retirement several weeks ago. For many years he had been associated in practice with his son, Dr. Buford W. McNeer.

Doctor McNeer was a member of the Summers County Medical Society, the West Virginia State Medical Association, and the American Medical Association.

He is survived by his widow, the former Sallie Cleveland Withrow, and two sons, Dr. Buford W. McNeer and State Senator Forest L. McNeer, of Hinton.

* * * *

ANDREW J. P. WILSON, M. D.

Dr. Andrew J. P. Wilson, 81, of Wheeling, died November 17, 1949, at his home in that city following an illness of several months.

He was engaged in active practice in the Wheeling area for over fifty years.

Doctor Wilson received his M. D. degree in 1894 from the University of Pennsylvania School of Medicine, Philadelphia, and was licensed to practice medicine in West Virginia that same year. He was a native of Ohio county. He is survived by his widow and two sisters.

CORRESPONDENCE

The National Foundation for Infantile Paralysis, Inc.
120 Broadway
New York 5, N. Y.

November 4, 1949

Dr. Walter E. Vest, Editor
West Virginia Medical Journal
Charleston, West Virginia
My dear Doctor Vest:

There have been many inquiries recently regarding the arrangements for covering the cost of care for poliomyelitis patients. There are a number of factors which will be of interest to your readers.

During 1949 a poliomyelitis incidence of unprecedented size (more than 37,000 stricken since January 1) has put serious financial strain upon the National Foundation for Infantile Paralysis. For the first time in its eleven year history it was necessary to conduct a Polio Epidemic Emergency Drive which although very helpful did not entirely meet current needs.

In its avowed purpose to lead, direct and unify the national fight against infantile paralysis the National Foundation undertook support of research and education, for in these areas lie the ultimate hope for eradication of poliomyelitis. These programs are not to be compromised in any way.

The greatest cost to the National Foundation, however, is payment for medical care to patients. It is urgent for all physicians to assist in the institution of measures which will reduce costs without prejudice to patients. The chief costs are for hospitalization. Many poliomyelitis patients are hospitalized when they can be cared for at home at a reduced cost.

Our experience in this year's epidemic which has spared virtually no part of the country suggests the following:

1. Abortive, nonparalytic and mildly paralytic poliomyelitis patients are being hospitalized in the mistaken idea that the stated period of isolation must be spent in the hospital.
2. Overly prolonged hospitalization is frequent. This is particularly true of the paralytic patient who has achieved maximum improvement from daily physical therapy. Home care with periodic office or clinic visits is then in order.
3. There still exists in some places a general attitude that poliomyelitis is a bizarre disease which only a few physicians can manage. This is not so. It is disturbing, for example, to find physicians leaning so heavily upon the guidance of physical therapists and nurses. The physician's assessment of the total patient is the best index in determining when a patient shall leave hospital to receive home, office or clinic care.
4. Patients hospitalized on general ward services are not charged medical fees ordinarily. When patients are hospitalized on isolation wards for poliomyelitis, however, bills for medical fees are at times submitted. Payment is frequently made by the local chapters of the National Foundation whose treasuries are now generally depleted.

It is hoped that your readers will understand clearly how urgent is our need for cooperation from all practicing physicians in the matters mentioned above.

Sincerely yours,
Hart E. Van Riper, M. D.,
Medical Director.

INDEX TO VOLUME XLV

WEST VIRGINIA MEDICAL JOURNAL — 1949

A

Acuff, Herbert, M. D.—Diagnosis and Management of Complications of Peptic Ulcer ... June, 141
Acute Perforation of Gastroduodenal Ulcer (Report of 42 Cases)—R. M. German, Jr., M. D., and A. U. Tieche, M. D. ... Aug., 208
Anesthesia, Curare in—John F. Morris, M. D. ... May, 101
Anthracosilicosis and Its Symptomatic Treatment—Burgess Gordon, M. D., Hurley L. Motley, M. D., Peter A. Theodos, M. D., and Leonard P. Lang, M. D. ... June, 125
Anthracosilicosis, Electrocardiographic Studies in—Leonard P. Lang, M. D. ... Nov., 303
Anthracosilicosis, Emphysema — Burgess Gordon, M. D. ... Nov., 299
Anthracosilicosis, The Clinical Evaluation of Disability in—Peter A. Theodos, M. D. ... Nov., 306
Antibiotic Agents, A Concise Pharmacology of the New—David Fielding Marsh, Ph. D. ... Oct., 280
Antiseptic Drugs and Antibiotics in the Treatment of Infections of the Urinary Tract, An Evaluation of—Austin I. Dodson, M. D. ... Jan., 1
Appendices Epiploicae, Infarction of the—John D. German, M. D. ... Feb., 41
Application of Thoracic Surgery—Morris G. Buckles, M. D. ... Dec., 335
Approach to the X-Ray Film, The—Karl J. Myers, M. D. ... June, 133
Ault, Garnet W., M. D.—Recent Advances in the Surgical Treatment of Colon and Rectal Disease ... July, 169

B

Beasley, B. T., M. D.—Carcinoma of the Uterus ... Apr., 88
Blair, F. Lloyd, M. D.—Carcinoma of the Jejunum ... Feb., 44
Boxing and Intracranial Injuries—Joseph D. Romino, M. D. ... Jan., 19
Breast, Cancer of the—T. P. Mantz, M. D., Everett Squire, M. D., J. Ross Hunter, M. D., and Walter Putschar, M. D. ... Jan., 6
Bronaugh, Wayne, M. D.—Management of the Compound Fracture ... May, 106
Buckles, Morris G., M. D.—Application of Thoracic Surgery ... Dec., 335
Burns of the Esophagus, Lye—Wilbur F. Shirkey, M. D. ... Feb., 37

C

Cancer of the Breast—T. P. Mantz, M. D., Everett Squire, M. D., J. Ross Hunter, M. D., and Walter Putschar, M. D. ... Jan., 6
Cannady, John E., M. D., and Harkrader, Charles J., Jr., M. D.—Surgical Treatment of Congenital Recto-Urethral Fistula ... Apr., 83
Carcinoma of the Jejunum (Case Report)—F. Lloyd Blair, M. D. ... Feb., 44
Carcinoma of the Uterus—B. T. Beasley, M. D. ... Apr., 88
Chylous Cyst of the Greater Omentum, Multilocular—R. H. Edwards, M. D., and A. J. Villani, M. D. ... Feb., 35
Clinical Evaluation of Disability in Anthracosilicosis, The—Peter A. Theodos, M. D. ... Nov., 306
Colon and Rectal Disease. Recent Advances in the Surgical Treatment of—Garnet W. Ault, M. D. ... July, 169
Compound Fracture, Management of the—Wayne Bronaugh, M. D. ... May, 106
Compression Fractures of the Dorsal and Lumbar Spine. Treatment of—Howard A. Swart, M. D. ... Jan., 17
Congenital Recto-Urethral Fistula, Surgical Treatment of—John E. Cannady, M. D., and Charles J. Harkrader, Jr., M. D. ... Apr., 83
Concise Pharmacology of the New Antibiotic Agents, A—David Fielding Marsh, Ph. D. ... Oct., 280
Coronary Occlusion and Myocardial Infarction Polycythemia Vera (Erythremia) With: Report of a Case Treated with Anticoaglants—John S. Pearson, M. D., and Jean F. Noertker, B. A. ... Mar., 65
County Health Department and the Practicing Physician, The—Milton I. Roemer, M. D. ... Aug., 215
Curare in Anesthesia—John F. Morris, M. D. ... May, 101

D

Dempsey, Mary—Trends in Tuberculosis Programs ... Apr., 86
Diabetes Mellitus, The Evaluation of Globin Insulin in the Treatment of —William M. Sheppe, M. D., and Wm. M. Sheppe, Jr., M. D. ... Apr., 79
Diagnosis and Management of Complications of Peptic Ulcer—Herbert Acuff, M. D. ... June, 141
Dodson, Austin I., M. D.—An Evaluation of Antiseptic Drugs and Antibiotics in the Treatment of Infections of the Urinary Tract ... Jan., 1
Dorsal and Lumbar Spine, Treatment of Compression Fractures of the—Howard A. Swart, M. D. ... Jan., 17
Duodenum, Prolapse of the Gastric Mucosa into the—A. B. Curry Ellison, M. D., and E. W. Squire, M. D. ... Sept., 237

E

Edwards, R. H., M. D., and Villani, A. J., M. D.—Multilocular, Chylous Cyst of the Greater Omentum ... Feb., 35
Electrocardiogram, Physiologic Basis of the—R. J. McNamara, M. D. ... Oct., 269
Electrocardiographic Studies in Anthracosilicosis—Leonard P. Lang, M. D. ... Nov., 303
Ellison, A. B. Curry, M. D., and Squire, E. W., M. D.—Prolapse of the Gastric Mucosa into the Duodenum ... Sept., 237
Emphysema in Anthracosilicosis—Burgess Gordon, M. D. ... Nov., 299
Epigastric Hernia—W. R. Wilkinson, M. D. ... Dec., 328
Esophagus, Lye Burns of the—Wilbur F. Shirkey, M. D. ... Feb., 37
Evaluation of Globin Insulin in the Treatment of Diabetes Mellitus, The—Wm. M. Sheppe, M. D., and Wm. M. Sheppe, Jr., M. D. ... Apr. 79
Eye, Histamine Diphosphate Used Topically in the—Edwin M. Shepherd, M. D. ... Mar., 62
Experience With Lumbar Sympathectomy in Vascular Diseases of the Lower Extremity—Charles D. Hershey, M. D. ... Mar., 56

F

Frazier, Claude A., M. D., and Warfield, J. Ogle, M. D.—Pyloric Stenosis: Its Problems and management ... Sept., 235
Fractures of the Dorsal and Lumbar Spine Treatment of compression—Howard A. Swart, M. D. ... Jan., 17

G

Gastroduodenal Ulcer, Acute Perforation of (Report of 42 Cases)—R. M. German, Jr., M. D., and A. U. Tieche, M. D. ... Aug., 208
Gastric Mucosa, Prolapse of the into the Duodenum—A. B. Curry Ellison, M. D., and E. W. Squire, M. D. ... Sept., 237
German, John D., M. D.—Infarction of the Appendices Epiploicae ... Feb., 41
German, R. M., Jr., M. D. and Tieche, A. U., M. D.,—Acute Perforation of Gastroduodenal Ulcer (Report of 42 Cases) ... Aug., 208
Globin, Insulin in the Treatment of Diabetes Mellitus, Evaluation of —Wm. M. Sheppe, M. D., and Wm. M. Sheppe, Jr., M. D. ... Apr., 79
Gordon, Burgess, M. D.—Emphysema in Anthracosilicosis ... Nov., 299
Gordon Burgess, M. D., Motley, Hurley L., M. D., Theodos, Peter A., M. D., and Lang, Leonard P., M. D.—Anthracosilicosis and Its Symptomatic Treatment ... June, 125

H

Hall, Sobisca S., M. D.—Secretory Otitis Media ... Dec., 325
Harkrader, Charles J., Jr., M. D. and Cannady, John E., M. D.—Surgical Treatment of Congenital Recto-Urethral Fistula ... Apr., 83
Haugh, Donald C., M. D.—Modern Concepts of Acute Pancreatitis ... Aug., 199
Heart Disease, Pregnancy and Labor Complicated by—Walter K. Yates, M. D. ... July, 173
Hernia, Epigastric—W. R. Wilkinson, M. D. ... Dec., 328
Herpes Zoster Ophthalmicus—T. W. Moore, M. D. ... Mar., 53
Hershey, Charles D., M. D.—Experience with Lumbar Sympathectomy in Vascular Diseases of the Lower Extremity ... Mar., 56
Histamine Diphosphate Used Topically in the Eye —Edwin M. Shepherd, M. D. ... Mar., 62
Hunter, J. Ross, M. D., Mantz, T. P., M. D., Squire, Everett, M. D.. and Putschar, Walter, M. D.—Cancer of the Breast ... Jan., 6

I

Infarction of the Appendices Epiploicae—John D. German, M. D. ... Feb., 41
Infections of the Urinary Tract, An Evaluation of Antiseptic Drugs and Antibiotics in the Treatment of—Austin I. Dodson, M. D. ... Jan., 1
Intracranial Injuries, Boxing and—Joseph D. Romino, M. D. ... Jan., 19
Intravenous Procaine in Orthopedics—Athey R. Lutz, M. D., and Carmala J. Solomon, M. D. ... Oct., 285

J

Jejunum, Carcinoma of the—F. Lloyd Blair, M. D. ... Feb., 44

K

Koenigsberg, Max, M. D.—Simplified Test for Low Sodium Diet ... Dec., 332

L

Lang, Leonard P., M. D.—Electrocardiographic Studies in Anthracosilicosis ... Nov., 303
Lang, Leonard P., M. D., Gordon, Burgess, M. D., Motley, Hurley, L., M. D., and Theodos, Peter A., M. D.—Anthracosilicosis and Its Symptomatic Treatment ... June, 125
Low Sodium Diet, Simplified Test for—Max Koenigsberg, M. D. ... Dec., 332
Lumbar Sympathectomy in Vascular Diseases of the Lower Extremity, Experience with—Charles D. Hershey, M. D. ... Mar., 56
Lutz, Athey R., M. D., and Solomon, Carmala J., M. D.—Intravenous Procaine in Orthopedics ... Oct., 285
Lye Burns of the Esophagus—Wilbur F. Shirkey, M. D. ... Feb., 37

M

Management of the Compound Fracture—Wayne Bronaugh, M. D. ... May, 106
Mantz, T. P., M. D. Squire, Everett, M. D., Hunter, J. Ross, M. D., and Putschar, Walter, M. D.—Cancer of the Breast ... Jan., 6
Marsh, David Fielding, Ph. D.—A Concise Pharmacology of the New Antibiotic Agents ... Oct., 280
McGehee, Melvin W., M. D.—Pediatric Ophthalmology ... Jan., 11
McGehee, Melvin W., M. D.—Refraction Grievences, Their Cause and Cure ... July, 159
McNamara, R. J., M. D.—The Physiologic Basis of the Electrocardiogram ... Oct., 269
Modern Concepts of Acute Pancreatitis—Donald C. Haugh, M. D. ... Aug., 199
Moore, T. W., M. D.—Progress in Medicine Since 1 Graduated in 1893 ... Nov., 311
Moore, T. W., M. D.—Herpes Zoster Ophthalmicus Mar., 53
Morris, John F., M. D.—Curare in Anesthesia ... May, 101
Morrow, James K., M. D.—Present Trends in Psychiatric Therapy ... Oct., 288
Motley, Hurley L., M. D., Theodos, Peter A., M. D., Lang, Leonard P., M. D., and Gordon, Burgess, M. D.—Anthracosilicosis and Its Symptomatic Treatment ... June, 125
Multilocular, Chylous Cyst of the Greater Omentum—R. H. Edwards, M. D., and A. J. Villani, M. D. ... Feb., 35
Myers, Karl J., M. D.—The Approach to the X-Ray Film ... June, 133
Myopia, The Use of Base-In Prisms in the Treatment of School—Oscar B. Nugent, M. D. May, 103

N

Nestmann, Ralph H., M. D.—Saroidosis ... Sept., 240
Noertker, Jean F., M. D., and Pearson, John S., M. D.—Polycythemia Vera (Erythremia) With Coronary Occlusion and Myocardial Infarction Mar., 65
Nugent, Oscar B., M. D.—The Use of Base-In Prisms in the Treatment of School Myopia ... Apr., 103
Nugent, Oscar B., M. D.—The Treatment of Strabismus ... July, 165

O

O'Dell, Morris H., M. D.—Traumatic Rupture of the Membraneous Urethra ... Aug., 212
Oliker, A. John, M. D.—Uterocele With Prolapse Through Urethra ... May, 109
Omentum, Multilocular, Chylous Cyst of the Greater—R. H. Edwards, M. D., and A. J. Villani, M. D. ... Feb., 35
Ophthalmicus, Herpes Zoster—T. W. Moore, M. D. Mar., 53
Ophthalmology, Pediatric—Melvin W. McGehee, M. D. ... Jan., 11
Orthopedics, Intravenous Procaine in—Athey R. Lutz, M. D., and Carmala J. Solomon, M. D. Oct., 285
Otitis Media, Secretory—Sobisca S. Hall, M. D. Dec., 325

P

Pancreatitis, Modern Concepts of Acute—Donald C. Haugh, M. D. ... Aug., 199
Pathologic Conscious States—Edward F. Reaser, M. D. ... June, 136
Pearson, John S., M. D., and Noertker, Jean F., B. A.—Polycythemia Vera (Erythremia) With Coronary Occlusion and Myocardial Infarction Mar., 65
Pediatric Ophthalmology—Melvin W. McGehee, M. D. ... Jan., 11
Peptic Ulcer, Diagnosis and Management of Complications of—Herbert Acuff, M. D. ... June, 141
Pharmacology of the New Antibiotic Agents, a Concise—David Fielding Marsh, Ph. D. ... Oct., 280
Physiologic Basis of the Electrocardiogram, The—R. J. McNamara, M. D. ... Oct., 269
Polycythemia Vera (Erythremia) With Coronary Occlusion and Myocardial Infarction—John S. Pearson, M. D., and Jean F. Noertker, B. A. ... Mar., 65
Pregnancy and Labor Complicated by Heart Disease—Walter K. Yates, M. D. ... July, 173
Present Trends in Psychiatric Therapy—James K. Morrow, M. D. ... Oct., 288
Prisms, the Use of Base-In in the Treatment of School Myopia—Oscar B. Nugent, M. D. ... May, 103
Progress in Medicine Since I Graduated in 1893—T. W. Moore, M. D. ... Nov., 311
Prolapse of the Gastric Mucosa into the Duodenum—A. B. Curry Ellison, M. D., and E. W. Squire, M. D. ... Sept., 237
Psychiatric Therapy, Present Trends in—James K. Morrow, M. D. ... Oct., 288
Putschar, Walter, M. D., Mantz, T. P., M. D., Squire, Everett, M. D., and Hunter, J. Ross, M. D.—Cancer of the Breast ... Jan., 6
Pyloric Stenosis: Its Problems and Management—Claude A. Frazier, M. D., and J. Ogle Warfield, M. D. ... Sept., 235

R

Reaser, Edward F., M. D.—Pathologic Conscious States ... June, 136
Recent Advances in the Surgical Treatment of Colon and Rectal Disease—Garnet W. Ault, M. D. ... July, 169
Recto-Urethral Fistula, Surgical Treatment of Congenital—John E. Cannady, M. D., and Charles J. Harkrader, Jr., M. D. ... Apr., 83
Reed, Thomas G., M. D.—Shall We Lose Our Heritage (President's Annual Address) ... Sept., 231
Refraction Grievences, Their Cause and Cure—Melvin W. McGehee, M. D. ... July, 159
Roemer, Milton I., M. D.—The County Health Department and the Practicing Physician ... Aug., 215
Romino, Joseph D., M. D.—Boxing and Intracranial Injuries ... Jan., 19

S

Sarcoidosis—Ralph H. Nestmann, M. D. ... Sept., 240
Secretory Otitis Media—Sobisca S. Hall, M. D. ... Dec., 325
Shall We Lose Our Heritage (President's Annual Address)—Thomas G. Reed, M. D. ... Sept., 231
Shepherd, Edwin M., M. D.—Histamine Diphosphate Used Topically in the Eye ... Mar., 62
Sheppe, Wm. M., M. D., and Sheppe, Wm. M., Jr., M. D.—Evaluation of Globin Insulin in the Treatment of Diabetes Mellitus ... Apr., 79
Shirkey, Wilbur F., M. D.—Lye Burns of the Esophagus ... Feb., 37
Simplified Test for Low Sodium Diet—Max Koenigsberg, M. D. ... Dec., 332
Solomon, Carmala J., M. D., and Lutz, Athey R., M. D.—Intravenous Procaine in Orthopedics ... Oct., 285
Squire, E. W., M. D., and Ellison, A. B. Curry, M. D.—Prolapse of the Gastric Mucosa into the Duodenum ... Sept., 237
Squire, Everett, M. D., Mantz, T. P., M. D., Hunter, J. Ross, M. D., and Putschar, Walter, M. D.—Cancer of the Breast ... Jan., 6
Strabismus, The Treatment of—Oscar B. Nugent, M. D. ... July, 165
Surgical Treatment of Congenital Recto-Urethral Fistula—John E. Cannady, M. D., and Charles J. Harkrader, Jr., M. D. ... Apr., 83
Swart, Howard A., M. D.—The Treatment of Compression Fractures of the Dorsal and Lumbar Spine ... Jan., 17

T

Theodos, Peter A., M. D.—The Clinical Evaluation of Disability in Antracosilicosis ... Nov., 306
Theodos, Peter A., M. D., Lang, Leonard P., M. D., Gordon, Burgess, M. D., and Motley, Hurley, L., M. D.—Anthracosilicosis and Its Symptomatic Treatment ... June, 125
Thoracic Surgery, Application of — Morris G. Buckles, M. D. ... Dec., 335
Tieche, A. U., M. D., and German, R. M., Jr., M. D.—Acute Perforation of Gastroduodenal Ulcer (Report of 42 Cases) ... Aug., 208
Traumatic Rupture of the Membraneous Urethra—Morris H. O'Dell, M. D. ... Aug., 212
Treatment of Compression Fractures of the Dorsal and Lumbar Spine, The—Howard A. Swart, M. D. ... Jan. 17
Treatment of Strabismus—Oscar B. Nugent, M. D. July, 165
Trends in Tuberculosis Programs—Mary Dempsey Apr., 86
Tuberculosis Programs, Trends in—Mary Dempsey, Apr., 86

U

Ureterocele with Prolapse through Urethra—A. John Oliker, M. D. ... May, 109
Urethra, Traumatic Rupture of the Membraneous—Morris H. O'Dell, M. D. ... Aug., 212
Urinary Tract Infections, An Evaluation of Antiseptic Drugs and Antibiotics in the Treatment of—Austin I. Dodson, M. D. ... Jan., 1
Use of Base-In Prisms in the Treatment of School Myopia, The—Oscar B. Nugent, M. D. ... May., 103
Uterus, Carcinoma of the—B. T. Beasley, M. D. ... Apr., 88

V

Vascular Diseases of the Lower Extremity, Experience with Sympathectomy in—Charles D. Hershey, M. D. ... Mar., 56
Villani, A. J. M. D., and Edwards, R. H., M. D.—Multliocular, Chylous Cyst of the Greater Omentum ... Feb., 35

W

Warfield, J. Ogle, M. D., and Frazier, Claude A., M. D.—Pyloric Stenosis: Its Problems and Management ... Sept., 235
Wilkinson, W. R., M. D.—Epigastric Hernia ... Dec., 328

X

X-Ray Film, The Approach to the—Karl J. Myers, M. D. ... June, 133

Y

Yates, Walter K., M. D.—Pregnancy and Labor Complicated by Heart Disease ... July, 173

WEST VIRGINIA STATE MEDICAL ASSOCIATION

ANNUAL ROSTER OF MEMBERS

(By Component Societies)

1949

BARBOUR-RANDOLPH-TUCKER

Berkeley, Julius L. — Elkins
Bucher, Samuel — Harman
Bush, A. Kyle — Philippi
Butt, A. P. — Elkins
Condry, R. J. — "
Corton, R. V. — "
Duffy, George — Thomas
Feldick, H. G. — Buffalo Center (Iowa)
Golden, B. I. — Elkins
Goodwin, Olin M. — Galloway
Goodwin, T. M. — Elkins
Gray, P. L. — "
*Hamilton, E. M. — Belington
Hanssmann, I. J., Council Bluffs (Iowa)
Harper, W. G. — Elkins
Hutton, E. E. — "
Jeffreys, Edna M. — Philippi
Johnston, C. E. — Parsons
Kroack, K. J. — Elkins
Lea, Melvin E. — Philippi
Lenox, Cora C. — "
Lenox, John E. — "
Leonard, C. L. — Elkins
Liggett, B. L. — Mill Creek
Lilienfeld, M. Semon — Parsons
Martin, Joseph E., Jr. — Elkins
Mauzy, M. C. — "
Michael, Guy H. — Parsons
*Miller, J. L. — Thomas
*Moore, S. G. — Stephens City (Va.)
Moyers, Emmet D. — Norton
Murphy, Franklin B. — Philippi
Myers, E. E. — "
Myers, Hu C. — "
Myers, K. J. — "
Nefflen, L. H. — Elkins
Oliker, A. John — Auburn (N. Y.)
*Owens, H. K. — Elkins
Roberts, Donald R. — "
Seltz, Herman — "
Shaffer, Cecil — Philippi
Skar, S. J. — Davis
Smith, Robt. E. — Parsons
Snedegar, Paul D. — Elkins
Storrs, Henry G. — Philippi
Stump, Michael — "
Townsend, Milford F. — Dailey
Woodford, J. R. — Philippi
Woodford, T. L. — Belington

BOONE

Ballard, O. D. — Van
Ballard, Wm. R. — Los Angeles (Cal.)
Barbour, W. L. — Whitesville
Clay, John L. — Morehead, (Ky.)
Glover, A. E. — Madison
Harless, W. F. — "
Hill, David H. — "
*Hunter, R. L. — Whitesville
Lewis, A. C. — Seth
MacCallum, O. D. — Madison
Pauley, D. F. — Jeffrey
Scott, J. M. — Madison
Smith, Harry A. — "
Stashak, F. J. — Nellis
Stoddard, Paul M. — Wharton

BROOKE

Booher, W. T. — Wellsburg
Hegner, H. L. — "
Megahan, C. R. — Follansbee
McGraw, Ralph — "
McMullen, J. P. — Wellsburg
Palmer, J. B. — "

CABELL

Amick, Frederick E. — Huntington
Barber, J. H. — "
Baer, Thomas B. — "
Barrett, Robert S. — "
Beard, H. E. — "
Beckner, W. F. — "
Biern, O. B. — "
Bloss, J. R. — "
Bobbitt, Ray M. — "
Booth, Frank M., Jr. — "
Boso, Clarence H. — "
Bourn, W. D. — Barboursville
Brandabur, J. J. — Huntington
Brown, B. F. — "
Brown, F. A. — "
Brown, J. R. — "
Buscaglia, C. J. — "
Campbell, O. C. — Hamlin
Carr, Joel F. — Huntington
Carter, J. Marshall — "
Chaboudy, Louis — Portsmouth, (O.)
Chambers, H. D. — Huntington
Chambers, V. L. — "
Christian, Leo E. — "
Clay, C. Stafford — "
Coffey, Francis L. — "
Cook, J. R. — "
Crews, Howard R. — "
*Crews, A. W. — "
Cronin, D. J. — "
Curry, R. H. — Barboursville
Daniels, W. F. — Huntington
Dobbs, Lee F. — "
Dodson, Ross M. — "
Duncan, C. S. — "
Esposito, Albert C. — "
Evans, Edward J. — "
*Ferguson, J. W. — Wayne
Flesher, Geo. T. — Huntington
Folsom, T. G. — "
Ford, C. P. S. — "
Ford, J. C. — "
Frame, Luke W. — "
Frazier, Claude — "
Gang, L. B. — "
Garrett, B. D. — Kenova
Genge, Cole D. — Huntington
Gerlach, E. B. — "
German, John D. — Clintonville (Wis.)
Gibson, A. P. — Huntington
Gribovsky, Emil — New York (N. Y.)
Guthrie, J. A. — Huntington
Guthrie, W. W. — "
Hamilton, O. L. — "
*Hardwick, Richard — "
Harwood, I. R. — "
Hatfield, H. D. — "
Hatton, Don V. — Louisville (Ky.)
Haught, David A. — Huntington
Hayden, Geo. D. — Richmond (Va.)
Hayman, J. S. — Chicago, (Ill.)
*Hawes, C. M. — Huntington
Heckman, James A. — "
*Hereford, W. D. — "
Hines, N. F. — "
Hirschman, I. I. — "
Hodges, F. C. — "
Hoffman, C. A. — "
Hoitash, F. J. — "
Holbrook, Thomas J. — "
Hoover, S. R. — "
Hubbard, J. E. — "
Humphrey, E. J., Jr. — "
*Hunter, W. B. — Coral Gables, (Fla.)
Hutchinson, J. L. — Huntington
Irons, Wm. E. — "
Johnson, G. D. — "
Jones, A. S. — "
Kappes, W. C. — "
Katz, Milton — Chicago (Ill.)
Kehoe, M. B. — Ft. Howard (Md.)
Ketchum, Dorsey P. — Huntington
Klump, J. S. — "
Levy, Fritz — "
Lusher, H. V. — "
MacCracken, Wm. B. — "
*MacKenzie, A. R. — "
Maguire, Henry F. — "
Marple, F. O. — "
Martin, W. B. — "
Matthews, W. E. — "
McClellan, G. O. — West Hamlin
McFarland, T. C. — Huntington
McGehee, M. W. — "
Mills, Woodrow W. — Kenova
Moore, L. J. — Huntington
Moore, M. B. — "
*Moore, T. W. — "
Morris, John F. — "
Morrison, G. C. — "
Mullens, H. S. — Kenova
Neal, W. E. — Huntington
Neal, W. L. — "
Owen, Thelma V. — "
Parsons, W. J. — "
Pearson, John S. — "
Plymale, Clarence H. — "
Polan, Charles G. — "
Polan, Charles M. — "
Politano, V. A. — Milton
Pollock, Bruce H. — Huntington
Porter, W. J. — Wayne
Powell, Lucius L. — Huntington
Ratcliff, G. A. — "
Reaser, E. F. — "
Reynolds, C. O. — "
Reynolds, Otis E. — "
Richmond, L. C. — Milton
Ricketts, J. E. — Huntington
Rife, J. W. — Kenova
Rose, E. E. — Huntington
Rowley, W. N. — Huntington
Rutherford, A. G. — "
Schnitt, Sidney — "
Schuller, F. X. — "
Scott, F. A. — "
*Shafer, E. E. — "
Sherman, John J. — "

Silver, Harry ... Milton
*Sloan, R. M. ... Huntington
Smith, W. P. ... "
Staats, Roydice ... "
Steenbergen, J. H. ... "
Stemmermann, Marguerite ... "
Stevens, Richard J. ... "
Stevens, Sarah L. C. ... "
Stiles, H. A. ... "
Stone, John E. ... "
Stotts, Roscoe ... Kenova
Strange, W. W. ... Huntington
Swann, W. C. ... "
*Taylor, C. T. ... "
Taylor, I. Ewen ... "
Taylor, I. W. ... "
Terlizzi, C. L. ... "
Thomas, M. J. ... "
Thomas, Myrtle M. ... "
Thomas, Wes C. ... "
Van Metre, R. S. ... "
Vest, W. E. ... "
Walden, Geo. W. ... West Hamlin
Wayburn, Gates J. ... Huntington
Webb, Joseph P. ... "
Weinstein, Stanley ... "
White, Marion L. ... "
Wilkinson, R. J. ... "
Wilkinson, Walter R. ... "
Willis, C. G. ... "
Wright, C. B. ... "
Wylie, R. M. ... "
Yates, Walter K. ... "

CENTRAL WEST VIRGINIA

*Allen, S. P. ... Webster Springs
Andrew, H. M. ... Weston
Biehl, Harold P. ... Richwood
Brown, E. S. ... Summersville
*Brown, H. S. ... Sutton
*Burton, G. M. ... Weston
*Burton, S. H. ... "
Chamberlain, R. L. ... "
Cofer, J. M. ... Bergoo
*Cooper, E. R. ... Spencer
Corder, G. C. ... Jane Lew
Corder, O. W. ... Weston
Cutright, R. G. ... Buckhannon
Davisson, C. R. ... Weston
*Deeds, L. W. ... Buckhannon
Dillinger, K. A. ... Baltimore (Md.)
*Dodrill, J. B. ... Webster Springs
Eakle, J. C. ... Sutton
*Eakle, O. O. ... "
Echols, J. E. ... Richwood
Echols, W. E. ... "
Fisher, E. L. ... Gassaway
Fisher, R. M. ... Weston
Ford F. R. ... Oak Hill
Forman, Worth B. ... Buckhannon
Glasscock, James R. ... Richwood
Hall, Roberta ... Weston
Hartman, Ira F. ... Buckhannon
Hill, G. D. ... Camden-on-Gauley
*Hill, L. O. ... "
Holcomb, C. W. ... Sutton
*Hudkins, O. L. ... Weston
Huffman, J. C. ... Buckhannon
Huffman, W. W. ... Gassaway
Hunter, E. H. ... Webster Springs
Hutchinson, B. M. ... Sutton
*King, W. P. ... Weston
Knapp, J. L. ... Dallas (Tex.)
Leef, J. L. ... Richwood
McClung, James E. ... "
McClung, James ... "
McClung, W. D. ... "
McMullin, J. F. ... Weston
Morrison, M. T. ... Sutton
Page, B. L. ... Buckhannon
Peck, James W. ... Summersville
Peck, John D. ... "
*Rohr, C. B. ... Alum Bridge
Rusmisell, J. A. ... Buckhannon
Rusmisell, J. A., Jr. ... "
*Snyder, George ... Weston
Snaith, Theresa O. ... "
*Snyder, George ... "
Snyder, Thomas M. ... "
Stalnaker, Guy ... Glenville
Strickland, L. N. ... Summersville
Tait, H. Sinclair ... Weston
Trinkle, E. A. ... "
*Van Tromp, H. O. ... French Creek
*Walker, Everett ... "
*Wise, Herbert B. ... Weston
Zeller, Chas. A. ... "

DODDRIDGE

Poole, A. ... West Union
White, R. S. ... " "

EASTERN PANHANDLE

Aldis, Henry ... Shepherdstown
Appleby, George S. ... Martinsburg
Armentrout, A. W. ... "
Bitner, E. H. ... "
Clapham, R. E. ... "
Eagle, A. B. ... "
Fox, M. R. ... Kecoughton (Va.)
Fry, S. Oscar ... Charles Town
Glenn, Marshall ... " "
Glover, V. L. ... Martinsburg
Guthrie, J. K. ... "
Halton, Wm. L. ... "
Hendrix, N. B. ... "
Kilmer, John H. ... "
Martin, G. O. ... "
McFetridge, S. Eliz. ... Shepherdstown
McIntyre, Donald K. ... Bolivar
Morison, G. P. ... Charles Town
Oates, Max ... Martinsburg
Oates, T. K. ... "
Porterfield, M. H. ... "
Power, C. G. ... "
Shaw, D. J. ... "
Talbott, R. B. ... "
Tonkin, H. G. ... Williamsport (Md.)
Van Metre, J. L. ... Charles Town
Wallace, Wm. A. ... Martinsburg
Wanger, Halvard ... Shepherdstown
Warden, W. P. ... Charles Town
Williams, L. Mildred ... " "
Zepp, E. Andrew ... Martinsburg

FAYETTE

Bays, A. E. ... Montgomery
Bilger, F. W. ... McComas
Bittinger, W. P. ... Summerlee
Boone, R. R., Jr. ... Smithers
*Brugh, B. F. ... Clearwater (Fla.)
Bundy, W. E., Jr. ... Oak Hill
Carter, Eugene S., Jr. ... Montgomery
Claiborne, W. L. ... "
Davis, W. B. ... Rainelle
Dorsey, C. S. ... Kingston
Frame, Eugene M. ... Winona
*Gordon, P. L. ... Charleston
Harless, L. R. ... Gauley Bridge
Hodges, G. G. ... Mt. Hope
Hresan, M. G. ... Fayetteville
Hughes, C. B., Jr. ... Montgomery
Jackson, H. M. ... Leesburg (Va.)
Jarrett, J. N. ... Oak Hill
Jones, E. E., Jr. ... Mt. Hope
Laird, T. Kerr ... Montgomery
Laird, Wm. R. ... "
*Martin, H. C. ... East Rainelle
Merriam, C. G. ... Page
Moore, M. A. ... Longacre
Morin, G. L. ... Jenkins (Ky.)
Nutter, E. V. ... Gauley Bridge
Oden, Philip ... Ronceverte
Pantera, Geo. B. ... Oak Hill
Peck, DeWitt ... Montgomery
Peck, R. S. ... Cannelton
Puckett, B. F. ... Oak Hill
Sims, Thomas C. ... Fayetteville
Skaggs, H. C. ... Montgomery
Smith, G. A. ... "
Smith, Hal W. ... San Fran. (Calif.)
Stallard, C. W. ... Montgomery
Thompson, E. B. ... "
Thompson, J. B. ... Oak Hill
Troutman, H. F. ... Logan
Updike, R. A. ... Montgomery
Watkins, C. E. ... Oak Hill
Wiseman, Henry A., III ... Montgomery

GREENBRIER VALLEY

Amick, Andrew Z. ... Lewisburg
Baker, James P. ... White Sulphur Spgs.
Ballou, Chas. ... " " "
Dilley, C. K. ... Marlinton
Ferrell, A. D. ... "
Ferrell, R. M. ... Lewisburg
Gray, David B. ... Quinwood
Gunning, H. D. ... Ronceverte
Hawkins, R. F. ... Lewisburg
Houck, C. L. ... "
Jackson, C. C. ... East Rainelle
Klausman, Wm. A. ... Rupert
Lanham, A. G. ... Ronceverte
Leech, J. G. ... Quinwood
Lemon, C. W. ... Lewisburg
*Mahood, C. F. ... Alderson
Mamick, Stephen ... White Sul. Spgs.
Matney, T. G. ... Peterstown
McClintic, C. F. ... Williamsburg
McClure, T. R. ... Marlinton
McFerrin, S. A. ... Renick
Millman, T. H. ... Anjean
Myles, W. E. ... White Sulphur Spgs.
Preston, D. G. ... Lewisburg
Prillaman, P. E. ... Ronceverte
Strader, H. B. ... White Sulphur Spgs.
Wall, C. I. ... Rainelle
Williams, J. O. ... Alderson
Williams L. ... E. Rainelle

HANCOCK

Bogarad, M. ... Weirton
Brand, J. M. ... Chester
Fisher, J. E. ... New Cumberland
Flood, R. E. ... Cove Sta., Weirton
Focer, R. L. ... Weirton
Greco, Ray S. ... "
Hall, J. E. ... Newell
Justice, E. L. ... Cove Sta., Weirton
Kosanovic, F. ... Weirton
McNinch, E. R. ... Baltimore (Md.)
Pugh, David S. ... Chester
Rigas, George S. ... Weirton
Schwartz, L. O. ... "
Smith, G. C. ... Cove Sta., Weirton
Thompson, J. L. ... Weirton
Weller, Eli J. ... "
Whitaker, L. A. ... "
Whitaker, Theo. R. ... "
Yurko, A. A. ... Cove Sta., Weirton
Yurko, Leonard ... Weirton

HARRISON

Allen, E. Ross — Clarksburg
Allman, W. H. — "
Brake, B. S. — "
Brannon, E. H. — Bridgeport
Brennan, J. T. — Clarksburg
Chandler, F. C. — Bridgeport
Coffindaffer, R. S. — Shinnston
*Cruikshank, D. P. — Lumberport
Davis, W. M. — Bridgeport
*Esker, H. H. — Clarksburg
Evans, Geo. F. — "
Farrell, Marcus E. — "
Fischer, Herman — "
Flowers, Earl N. — "
*Folk, John — Bridgeport
Genin, F. G. — Clarksburg
Gilman, Joseph — "
Gocke, Jack T. — "
Gocke, T. V. — "
Gocke, W. T. — "
Grant, Sylvia — Park
Greer, C. C. — Clarksburg
Hall, Sobisca S. — "
Hanifan, R. K. — "
*Hill, E. A. — LaHabra (Calif.)
Humphries, R. T. — Clarksburg
Jabaut, S. W. — Shinnston
Jackson, Kenna — Clarksburg
Jarvis, C. C. — "
Kelly, A. O. — Wallace
*Kemper, A. J. — Lost Creek
Kerr, John C. — Clarksburg
Klyza, S. J. — "
Ladwig, O. W. — Wilsonburg
Langfitt, F. V. — Clarksburg
Linger, R. B. — "
Lough, D. H. — "
Lynch, Richard V. — "
Marks, A. Robert — "
McClung, James R. — "
McCuskey, John F. — "
*McGuire, J. P. — "
Mills, L. H. — "
Neal, L. E. — "
Nutter, R. J. — "
*Ogden, C. R. — "
Page, J. E. — "
Pearcy, C. L. — Salem
*Pendleton, E. — Huntington
Pickens, J. Keith — Clarksburg
Ping, E. C. — "
Pletcher, R. O. — Lost Creek
*Post, A. T. — Clarksburg
Post, C. O. — "
*Post, S. H. — Volga
Prickett, D. C. — Lumberport
Ralston, James G. — Clarksburg
Randolph, E. B. — "
Repass, James C. — Lumberport
*Riley, R. M. — Nutter Fort
Ritter, E. E. — Salem
Rose, George W. — Clarksburg
Shore, E. L. — Salem
Slater, C. N. — Clarksburg
Spelsburg, W. W. — "
Stephenson, J. E. — "
Strother, W. L. — Salem
Thomas, H. V. — Clarksburg
Tucker, E. D. — Nutter Fort
Watkins, David A. — Buckhannon
Weaver, Andrew J. — Clarksburg
Whisler, H. A. — "
Wilkinson, B. W. — "
Williams, J. F., Jr. — "
*Willis, C. A. — Bridgeport
Wilson, J. E. — Clarksburg
Wilson, J. E., Jr. — "
Wornal, L. S. — Shinnston
Wright, E. B. — Clarksburg
Wright, W. B. — "
Zinn, L. D. — "

KANAWHA

Albrecht, M. — Charleston
Aliff, J. Paul — "
Allen, Joel — "
*Amick, A. L. — "
Anderson, R. L. — "
Angell, H. W. — "
Bachwitt, David — So. Charleston
Baer, Robt. E. — "
Bailey, Hugh A. — Charleston
Bailey, R. W. — Hurricane
Baldock, H. E. — Charleston
Baldock, W. E. — Columbus (O.)
Banks, J. Bankhead — Charleston
Bannen, W. J., Jr. — Dunbar
Barber, D. N. — Charleston
Barber, T. M. — "
Basman, Jack — "
Beddow, H. M. — "
Belknap, Helen M. — So. Charleston
Bivens, S. L. — Charleston
Black, W. P. — "
Blagg, B. V. — So. Charleston
Blake, Thos. H. — St. Albans
Bobbitt, O. H. — Charleston
Bock, Robt. C. — "
Boggs, Hunter — "
Boiarsky, Julius L. — "
Bonar, M. L. — "
Bowyer, A. B. — "
Bradford, Bert, Jr. — "
Brady, A. Spates, Jr. — "
Breisacher, Carl F. — "
Brick, John P. — "
Brown, H. M. — "
*Brown, R. J. — Sutton
Buff, I. E. — Charleston
Buford, R. K. — "
Bull, S. W. — Spencer
Burdette, Rex A. — Charleston
Calvert, R. L. — "
Cannaday, J. E. — "
Capito, G. B. — "
Carney, Harry A. — "
Champe, Preston — "
Chandler, A. C. — "
Churchman, V. T. — "
Clark, F. A. — "
Condry, John C. — "
Cooke, W. L. — "
Cox, L. E. — "
Crawford, R. A., Jr. — "
*Davis, E. A. — "
Dawson, R. O. — "
Dent, Duke A. — "
Dickerson, L. A. — "
Dobbs, F. H. — "
Duling, M. S. — "
Dunlap, J. L. — Nitro
Dunn, Edward T. — Martinsburg
Dunn, R. H. — So. Charleston
Eckmann, L. M. — So. Charleston
Elkin, W. Paul — Charleston
Ellison, A. B. Curry — "
Engelfried, C. H. — "
Erwin, F. L. — Burnwell
Escue, H. M. — Charleston
Eves, F. P. — Kayford
Fisher, H. H. — Dunbar
Fleshman, C. M. — Clendenin
Frame, R. I. — Sharples
Frank, Ludwig — Charleston
Frazier, J. W. — Charleston
Gallagher, Mary V. — "
Gearhart, Elmer A. — St. Albans
Glass, H. R. — Charleston
Glass, W. J. — Sissonville
Glass, W. J., Jr. — Charleston
Godbey, J. R. — "
Gordon, A. T. — Spencer
Gott, E. Fred — Charleston
Grace, James E. — Chelyan
Gray, James H. — Belle
Grisinger, G. F. — Charleston
Grisinger, Geo. F., Jr. — "
Grubb, Geo. L. — "
Hager, J. L. — "
Haley, John B. — "
Haley, P. A., II — "
Hall, Carl B. — "
Halloran, R. O. — "
Hamner, C. E. — Spencer
Hamrick, R. E. — Charleston
Hamrick, R. S. — St. Albans
Harper, O. M. — Clendenin
Harshbarger, Rodgers W. — St. Albans
Hartford, John J. — Rensford
Hash, John W. — Charleston
Hayes, E. R. — Chelyan
Heffner, Geo. P. — Charleston
Henson, E. B. — "
Henson, Edward V. — So. Charleston
Henson, Waldo C. — Charleston
Hills, H. M., Jr. — "
Hoffman, W. E. — "
Hogshead, Geo. W. — Nitro
Hoke, L. I. — "
Holcombe, V. E. — Charleston
Holt, John, A. B. — "
Houck, M. R. — Carbon
Howell, H. H. — Madison
Hudgins, A. P. — Charleston
Hutchinson, T. H. — Malden
Ireland, R. A. — Charleston
Irwin, G. G. — "
Jackson, Edward — St. Albans
Jarrell, C. A. — Charleston
Jarrett, John T. — "
Jarrett, L. A. — Dunbar
Jarrett, Marion F. — Charleston
Johnson, P. C. — Penn Yan (N.Y.)
Jones, Ralph J. — Charleston
Jordan, E. W. — "
Kammer, A. G. — So. Charleston
Kessel, C. R. — Ripley
Kessel, Ray — Ripley
Kessel, Russel — Charleston
Ketchum, R. D. — "
Koenigsberg, Max — "
Kuhn, Beatrice H. — "
Kuhn, Harold H. — "
Lampton, Arthur K. — "
Lance, V. L. — "
Law, H. D. — "
Lewis, C. E. — "
Lilly, Goff P. — "
Lilly, J. P. — "
Lilly, Milton, Jr. — "
Litsinger, E. A. — "
Litton, A. C. — "
Louft, R. R. — "
Lovejoy, U. C. — "
Lutz, John E. — "
MacDonald, K. G. — "
Mace, V. E. — "
Mantz, Theodore P. — "
Marquis, Henrietta — "
Marquis, J. N. — "
Matthews, L. B. — "
McClanahan, Rose — "
McClue, A. E. — Dunbar

McClure, U. G. — Charleston
McLaughlin, R. S. — "
*McMillan, W. A. — "
McMillan, W. O. — "
McNamara, R. J. — "
McPherson, H. D. — Eskdale
Mendeloff, M. I. — Charleston
Mican, H. M. — "
Milhoan, A. W. — Nitro
Miyakawa, George — Charleston
Morison, O. N. — "
Morrison, John T. — "
Moser, Lyle A. — "
Mynes, L. H. — "
Nelson, George O. — Nitro
Nestmann, Ralph H. — Charleston
Newhouse, N. H. — "
Niedermyer, J. W. — "
O'Dell, Richard N. — "
Palmer, G. F. — Pine Grove
Pearcy, Thompson — Charleston
Peck, Earl M. — "
Pence, R. E. — So. Charleston
Peters, J. T. — " "
Peterson, V. L. — Charleston
*Phillips, S. H. — St. Albans
Point, W. W. — Charleston
Polsue, W. C. — "
Powell, Charles W. — "
Preiser, Philip — "
Price, A. M. — Madison
Price, R. B. — Charleston
Pushkin, Willard — "
Putschar, W. J. G. — "
Quick, James C. — Clendenin
Reed, T. G. — Charleston
Reel, F. C. — "
Reeves, J. N. — "
Revercomb, P. H. — "
Rice, Wm. R. — Dunbar
Ritter, H. H. — Charleston
Robertson, G. C. — "
Robertson, H. L. — "
*Robertson, W. S. — "
Robins, J. E., Jr. — "
Robinson, J. H. — "
Rohr, J. U. — Sweet Springs
Rossman, Wm. B. — Charleston
Rucker, J. E. — "
*Schoolfield, G. C. — "
Seletz, A. A. — "
Selman, J. H. — "
Seltzer, Jos. P. — "
Seltzer, Leo M. — "
Sexton, Richard J. — "
Shamblen, Earle L. — "
Shawkey, A. A. — "
Shepherd, E. M. — "
Shepherd, W. S. — "
Shirkey, W. F. — "
Skaff, Victor S. — "
Skaggs, J. S. — Knoxville (Tenn.)
Skaggs, J. W. — Nitro
Slaughter, J. F. — Charleston
Smith, A. A. — Clay
Smith, B. A. — Huntington
Smith, C. B. — Charleston
Souleyret, S. B. — Cabin Creek
Soulsby, P. C. — St. Albans
Spector, Horatio A. — Charleston
Spencer, James T. — "
Spencer, T. N., Jr. — So. Charleston
Squire, E. W. — Charleston
Staats, Charles E. — "
Stanley, L. P. — "
Starcher, R. C. — Ripley
Stewart, W. C. — Charleston
Stoeckel, Catherine R. — "
Stoeckel, J. Edwin — "
Stork, A. Robt. — Logan
Summers, R. R. — Charleston
Swart, Howard A. — "
Thompson, A. C. — "
Thompson, H. G. — "
Thornhill, W. A., Jr. — "
Tuckwiller, P. A. — "
Tully, C. Carl — So. Charleston
Vaughan, E. O. — St. Albans
Vial, H. R. W. — So. Charleston
Ward, Harold W. — Charleston
Watts, C. N. — "
Webb, R. L. — "
Whiteside, C. T. — Kayford
Wilkerson, W. V. — Highcoal
Wilson, A. A. — Charleston
Wilson, W. B. — "
*Wilson, W. H. — St. Albans
Wise, Fred E. — Cabin Creek
Wohlford, R. F. — So. Charleston
Woodall, R. E. — Charleston
Work, W. F. — "

LOGAN

Altizer, A. E. — Accoville
*Aultz, L. L. — Omar
Brammer, F. E. — Dania (Fla.)
Brewer, W. E. — Logan
Chillag, Erwin R. — Holden
Cole, Bart — Logan
Combes, L. G. — Holden
Davis, C. A. — Logan
Deason, V. A. — "
Farley, H. H. — "
French, A. M. — "
Greene, Joseph L. — "
Hagen, Chas. H., Jr. — Holden
Hamilton, W. P. — Chapmanville
Hrutkay, W. J. — Lundale
Jamison, Frank R. — Logan
Kruger, I. M. — "
Lawson, L. W. — "
*Lawson, S. B. — "
Lyons, J. W. — Holden
*McClellan, W. T. — Ethel
Mullins, George R. — Logan
Newlin, Willard S — Lorado
*Parker, W. H. — Daytona (Fla.)
Patterson, J. L. — Logan
Poling, Owen — Eskdale
Roberts, R. W. — Man
*Round, F. L. — Holden
Rowan, W. S. — Logan
Scott, Robert K. — Charlottesville (Va.)
Smith, B. D. — Amhertsdale
*Smith, T. C. — Slagle
Starcher, E. H. — Logan
*Steele, L. E. — "
Straughan, J. M. — Amherstdale
Trippett, L. H. — Earling
Van Hoose, Harold — Man
Vaughan, R. R. — McConnell
Watson, Geo. N. — Logan

MARION

Baron, L. E. — Mannington
Barr, J. M. — Worthington
Bonnar, James M. — Fairmont
Bressler, David — Monongah
Carter, C. J. — Fairmont
Clinton, J. B. — "
Collins, J. C. — "
Criss, H. L. — "
Ehrgott, Wm. E. — "
Evans, Geo. T. — "
Fleming, H. C. — "
Frye, R. R. — Mannington
Gotses, Paul S. — Fairmont
*Grainger, G. A. — Farmington
Hamilton, D. D. — Mannington
Haynes, O. L. — Fairmont
Helmick, John P. — "
Hickson, Edward W. — "
*Holland, C. L. — "
Holland, E. A. — "
Jenkins, J. J. — Farmington
Jenkins, J. J., Jr. — Fairmont
*Johnson, H. R. — "
Johnson, Philip — "
Jones, R. Harold — "
Keister, H. S. — "
*Kinney, C. L. — "
Kinney, E. R. — Idamay
Lambert, L. R. — Fairmont
*Lawson, C. S. — "
Lawson, Wm. T. — "
Mallamo, J. T. — "
Maxwell, Jos. S. — "
*Moore, P. G. — Mannington
Morgan, G. V. — Fairmont
Norris, L. D. — "
Nunnally, Wm. O. — "
*Offner, J. E. — "
Orr, W. W. — Rachel
*Parks, C. L. — Fairmont
Parks, S. W. — "
Powell, Rupert W. — "
*Ramage, C. M. — "
Rogers, F. B. — "
Romino, J. D. — "
Sowers, F. F. — "
Spencer, L. O. — "
Swisher, K. Y. — Fairview
*Trach, J. M. — Fairmont
Trach, J. P. — "
Traugh, G. H. — "
Tuckwiller, J. R. — "
Vacheresse, Edw., Jr. — "
Van Horn, K. L. — "
Welton, W. A. — "
Wise, E. D. — "
Yost, Herschel R. — "
Yost, Joe — "
Yost, Paul — "

MARSHALL

Arnold, J. E. — McMechen
Ashworth, Harold B. — Moundsville
*Ashworth, R. A. — "
Benson, Don S. — "
*Bone, B. F. — "
Bradford, Wm. P. — "
Clubb, E. M., Jr. — McMechen
Dotson, Samuel C., Jr. — Cameron
Ealy, D. L. — Moundsville
*Fortney, Mary J. — Urichsville (O.)
Grimm, R. B. — Cameron
Hartwig, W. B. — Wheeling
*Hill, W. G. C. — Moundsville
McIlvain, W. E. — Huntington
*Peck, J. C. — Moundsville
*Striebich, J. A. — "
Yoho, David E. — "
Yoho, S. F. — "

MASON

Brown, C. Leonard — Pt. Pleasant
Bryant, R. F. — New Haven
Glassman, Dan — Pt. Pleasant
McElfresh, Edward V. — " "
*Petty, C. W. — Hartford

McDOWELL

Anderson, J. H. — Hemphill
Bailey, J. B. — Welch
Bennett, J. A. — Algoma
Bennett, Truett V. — Elbert
Best, E. M., Jr. — Atlanta (Ga.)
Boone, Henry — Norfolk (Va.)
Bracey, A. H. — Welch
Bracey, H. A. — "
Bragonier, R. K. — Keystone
Burger, Ray E. — Welch
Burke, John H. — Pageton
*Camper, H. G. — Welch
Carr, A. A. — War
Carr, A. B. — "
Castrodale, Dante — Welch
Champion, Jess Paul — Keystone
Chapman, C. B. — Welch
Clark, C. T. — Iaeger
Cochran, C. C. — Kimball
Coleman, H. M. — Louisville (Ky.)
Conrad, Paul L. — Welch
Coulon, N. F. — Gary
Counts, W. R. — Enfield (N.C.)
Cover, Wm. A. — Big Rock (Va.)
Davis, J. E. — Welch
Dean, Robt. J. — Kimball
Dodrill, R. Moore — Weston
Dunman, L. E. — Pittsburgh (Pa.)
Dyer, N. H. — Charleston
Edwards, R. H. — Welch
Evans, G. P. — Premier
Evans, H. P. — Keystone
Fleming, Robert I. — Northfork
Gale, Richard O. — Welch
Gates, Edmond O. — "
Gibson, E. D. — Iaeger
Hall, W. C. — Welch
Hatfield, D. D. — Yukon
Irvin, Guy E. — Welch
Jackson, C. F. — Bradshaw
*Johnston, W. L. — Princeton
Kersey, Marguerite J. — Bartley
Kersey, W. W., Jr. — "
Kirk, E. H. — Roanoke (Va.)
LaBarre, Joseph E. — Coalwood
Linkous, Otis E. — Welch
Lovas, E. E. — Berwind
*McCarty, J. L. — Cincinnati (O.)
Milchin, Sam — Jenkinjones
Miller, Irvin S. — Welch
Murphy, M. J. — "
Murry, J. H. — Vivian
Read, B. J. — Lynchburg (Va.)
Ried, Hubert L. — Thorpe
Rivers, D. G. — Gilliam
Saunders, Irvine — Welch
Schiefelbein, H. T. — "
Sinnett, John F. — Maybeury
Smith, M. W. — Biloxi (Miss.)
Straub, G. L. — Welch
Thompson, J. W. — Bradshaw
Torregrossa, M. F. — Ashland
Vaughan, Florien — Tralee
Vermillion, E. E. — Welch
Vick, C. W. — Jenkinjones
Villani, A. J. — Welch
Weiksnar, John F. — Caretta
Young, W. B. — Northfork

MERCER

Bird, Ben W., Jr. — Princeton
Blaydes, J. E. — Bluefield
Brown, A. Wilson — Bramwell
Butte, C. I. — Matoaka
Calvert, J. W. — Lynbrook (N. Y.)
Christie, Roy E. — Roanoke, (Va.)
Clements, B. S. — Matoaka
Connell, H. R. — Bluefield
Davis, H. C. — "
Davidson, S. G. — "
Flynn, Charles — "
Fowlkes, R. H. — "
Fox, J. Francke — "
Fox, P. R. — "
Fugate, R. C. — "
Gage, E. L. — "
Gatherum, Robert — "
Goodall, F. C. — Princeton
Hale, Daniel — "
Harloe, W. M. — Matoaka
Higginbotham, Upshur — Bluefield
Holroyd, Frank J. — Princeton
Horton, E. W. — Bluefield
Hosmer, D. L. — "
Hughes, C. R. — "
Johnston, Cecil F. — "
Kechele, D. V. — "
Kelly, V. L. — "
King, O. G. — "
Kirby, Edgar — "
Low, Richard — Princeton
Markell, J. I. — "
McCauley, E. W. — Bluefield
McGuire, John — "
Neale, Richard C. — "
Pace, L. J. — Princeton
Pearson, H. P. — Roanoke, (Va.)
*Peters, I. T. — Princeton
Reynolds, C. J. — Bluefield
Rogers, R. O. — "
St. Clair, C. T., Jr. — "
St. Clair, Wade H. — "
St. Clair, W. H., Jr. — "
Scott, Charles M. — "
Shanklin, J. R. — "
*Shanklin, R. V. — "
Sinclair, M. W. — "
Slusher, W. C. — "
Stuart, R. R. — "
Tanner, E. M. — "
Todd. G. L., Jr. — Cincinnati (O.)
Van Reenan, A. C. — Bluefield
Vass, T. E. — "
Vermillion, Uriah — Athens
Warden, Henry — Bluefield
Weier, Karl E. — "
Yost, J. W. — "

MINGO

Bentley, C. M. — Freeburn (KY.)
Boland, L. F. — Williamson
Brewster, G. W. — Fort Thomas (Ky.)
Burien, Frank J. — Williamson
Caton, John E. — Delbarton
Dennison, Robt. R. — Williamson
Diamond, Leon — Red Jacket
Drake, E. T. — Williamson
Easley, G. W. — "
Farley, James A. — New Orleans (La.)
Feldman, Walter S. — Williamson
Gaskel, J. C. — "
Hays, H. C. — "
Hodge, O. P. — Matewan
Irvine, G. B. — Williamson
Johnson, J. E. — Stone (Ky.)
Lawson, J. C. — Williamson
Lawson, Robt. C. — Red Jacket
Leech, W. F. — Williamson
McClees, J. E. — "
McClellan, Ernest E. — "
Price, W. H. — Chattaroy
Quincy, F. B. — Williamson
Rapp, Roy T. — "
Scott, W. W. — "
Stepp, E. P. — Kermit
Walker, W. J. — Iaeger
Williams, Arnold C. — Gilbert
Zando, S. G. — Williamson

MONONGALIA

Ashworth, Glenn — Morgantown
Baker, Wm. P. — "
Brannon, Dorsey — "
Bray, C. M. — "
Caserta, Peter — "
Collins, A. B. — "
Crynock, P. D. — "
Curry, Geo. A. — "
Dent, Charles F. — "
Douglas, Paul L. — Pursglove
Edstrom, Henry — Springfield (Ill.)
Fisher, R. W. — Morgantown
Fleming, Robert J. — "
Gerchow, K. E. — "
Harley, Dorcas C. — Galloway
Heiskell, E. F. — Morgantown
Heiskell, E. F., Jr., Wichita Falls (Tex.)
Hobbs, Melford L. — Morgantown
Howell, W. H. — "
Johnson, C. E. — "
King, H. V. — "
King, W. E. — "
Lawless, J. J. — "
Logue, Clarence A. — "
Madera, W. L. — "
Mahan, Charles — "
Maxwell, G. R. — "
*McBee, T. Jud — "
Miller, F. R. — "
Moore, B. J. — Denver (Col.)
*Moser, W. C. — St. Petersburg (Fla.)
Nottingham, Robert J. — Morgantown
Phillips, G. W. — "
Pickett, J. C. — "
*Post, D. M. — Lafayette (Ind.)
Pride, C. B. — Morgantown
Pride, Maynard — "
Randolph, Brady F., Jr. — "
Rich, H. A. — "
Romine, C. C. — "
Shaffer, H. A. — "
Sleeth, C. K. — "
Stecker, J. F. — "
Strawn, L. M. — "
Thompson, C. T. — "
Thompson, James — "
Trotter, J. H. — "
Trotter, Robert R. — Boston (Mass.)
Tucker, E. B. — Morgantown
Tucker, E. B., Jr. — "
Van Liere, E. J. — "
Warman, W. M. — "
Whittlesey, F. R. — "
*Wylie, C. B. — "

OHIO

Abersold, G. W. — Wheeling
Ackerman, W. E. — "
Armbrecht, Geo. L. — "
Armbrecht, R. J. — "
Azar, Philip L. — "
Bandi, R. T. — "
Belgrade, J. T. — "
Bickel, C. S. — "
*Bippus, E. S. — W. Palm Beach (Fla.)

Bird, J. D., Jr. — Wheeling
Bobes, S. S. — "
Boggs, W. C. — "
Bond, R. C. — "
Brown, Geo. H. — "
Buffington, C. B. — "
Caldwell, J. R. — "
Clovis, C. H. — "
Clovis, E. E. — "
Cope, Paul H. — "
Copeland, H. B. — "
Del Vecchio, James J. — "
Dickey, Herbert G., Jr. — "
Drinkard, R. U., Jr. — "
Farri, L. B. — "
Fawcett, Ivan — "
Fawcett, R. Allan — "
Gaydosh, F. J. — "
Gaydosh, M. — "
Gaydosh, M. A., Jr. — "
Gaynor, John S. — "
Gill, R. D. — "
Gilmore, J. W. — "
Glass, E. F. — "
Graham, Paul V. — "
Greeneltch, D. E. — "
Haislip, N. L. — "
Hazlett, James C. — "
Hershey, C. D. — "
Higgins, A. W. — "
Hiles, Charles H. — "
Holley, C. J. — "
Jones, A. L. — "
Jones, E. L. — "
Joseph, N. K. — "
Joseph, Wilda S. — "
Kalbfleisch, W. K. — "
Keesor, C. H. — "
Kellas, George M. — "
Klug, T. M. — "
Leslie, Warren D. — "
Lewellyn, R. H. — Elm Grove
Little, H. G. — Wheeling
Lukens, R. W. — "
Lyon, L. A. — "
MacGregor, D. A. — "
Maskrey, Frank R. — "
McClure, W. T. — "
McCoy, A. V. — Elm Grove
McCoy, C. G. — " "
McCurdy, J. A. — Wheeling
McCuskey, W. C. D. — "
McLain, W. H. — "
Megahan, Burke — Elm Grove
Meier, J. S. — Wheeling
Moore, John M. — "
Murphy, J. H. — "
Myers, J. W. — "
Niehaus, A. J. — "
Nolte, A. E. — "
Osterman, A. L. — "
Palmer, David W. — "
Pell, E. N. — "
Perilman, William — "
Phillips, Earl S. — "
Phillips, Edward M. — "
Phillips, Edward S. — "
Phillips, R. W. W. — "
Purpura, Anthony J. — "
Quimby, W. A. — "
Rankin, J. O. — "
Reed, R. J. — "
Reed, R. J., Jr. — "
Sammons, W. P. — "
Sauder, H. R. — "
Sheppe, W. M. — "
Snider, R. J. — "
Sonneborn, Robert M. — "
Spargo, James E. — "
Staats, O. M. — Wheeling
Steger, W. J. — "
Stewart, J. K. — "
Strobel, G. E. — "
Thoner, J. G. — "
Tomassene, R. A. — "
Tretheway, S. W. — "
Veremakis, Constantine — "
Vieweg, G. L., Jr. — "
Wanner, A. L. — "
Webb, W. S. — "
Weiler, H. G. — "
Williams, M. B. — "
Zubak, M. F. C. — "

PARKERSBURG ACADEMY

Adams, W. A. — Parkersburg
Asch, J. T. — "
Bateman, George — Williamstown
Batten, James C. — Parkersburg
Bell, Julius W. — "
Bevauqua, W. A. — Stirrat
Biddle, Robert M. — Parkersburg
Blair, F. L. — "
Blair, Holmes — "
Boice, R. H. — "
Boling, John S. — Grantsville
Boling, T. R. — "
Bronaugh, Wayne — Parkersburg
*Brown, C. N. — Swandale
Brundage, O. H. — Parkersburg
*Camp, W. C. — Spencer
Casto, O. J. — Parkersburg
Conley, Orva — "
Connolly, Ira — "
Connolly, Randall — "
Coplin, Robert W. — Elizabeth
Corbitt, Richard — Parkersburg
*Crooks, E. W. — "
Davis, R. E. — "
Davis, William W. — "
Dearman, A. M. — "
Depue, J. M. — Spencer
Dick, William S. — Parkersburg
Fankhauser, Robert — "
*Fisher, M. O. — "
Fosnaugh, Robert P. — "
Frazier, Ralph — Grantsville
*Gaynor, H. E. — Parkersburg
Gilbert, H. F. — "
Gile, John H. — "
Gilmore, M. A. — "
Goff, S. W. — "
Goff, W. R. — "
Goodhand, Charles L. — "
Hamilton, Richard — St. Marys
Harris, T. L. — Parkersburg
Harsha, G. M. — Sistersville
Hartman, E. C. — Parkersburg
Hively, H. D. — "
Holmes, E. B. — "
Hovis, Logan W. — "
Jarrell, S. E. — Harrisville
Jones, A. M. — Parkersburg
Jones, James P. — Pennsboro
Jones, L. P. — "
Judy, W. J. — Parkersburg
Kanner, Oscar — "
Keever, C. M. — Belpre (O.)
Keller, F. D. — Omar
Kizinski, A. B. — Parkersburg
Kizinski, I. M. — "
*Kraft, C. D. — "
Lattimer, R. D. — "
Leeson, L. R. — "
Linicome, Robert C. — "
Lutz, Athey R. — "
McCuskey, Paul L. — "
*Miller, R. B. — Parkersburg
Moore, Dana T. — "
Newman, R. C. — Spencer
Nicholson, B. B. — Parkersburg
Paden, Russell H. — "
Post, Guy R. — "
Potter, Fred J. — "
Priddy, N. D. — Ravenswood
Prunty, S. M. — Parkersburg
Quillen, O. L. — St. Marys
Ritchie, H. M. — Harrisville
*Rogers, J. G. — Parkersburg
Rogers, Watson F. — "
Santer, M. A. — "
Sheridan, Richard — "
Sidel, A. R. — Williamstown
Staats, E. D. — Ripley
Stark, Jack J. — Belpre (O.)
*Starkey, P. C. — Ravenswood
Thrasher, E. L. — Sistersville
Ulch, H. W. — Parkersburg
Veon, H. H. — "
Wade, James L. — "
Walton, L. E. — Pennsboro
Wharton, R. H. — Parkersburg
Widmeyer, R. S. — "
*Wise, S. D. H. — "
Woofter, A. C. — "
*Wright, E. L. — Parkersburg
Yeager, W. R. — "
Young, H. B. — St. Marys

POTOMAC VALLEY

Berry, P. E., Jr. — Piedmont
Bess, Robert W. — "
Bess, Thomas — Keyser
Brooks, O. V. — Moorefield
Brown, James D. — Romney
Coffman, Harry — Keyser
Coffman, Robert T. — "
Courrier, E. A. — "
Dailey, R. W. — Romney
Dyer, V. L. — Petersburg
Easton, J. F. — Romney
Flick, W. A. — Keyser
Giffin, T. C. — "
Grove, J. B. — Petersburg
Hartle, Gerald E. — Moorefield
Huffman, T. T. — Keyser
King, C. E. — Petersburg
Love, R. W. — Moorefield
Mathias, James D. — Wardensville
Maxwell, M. H. — Moorefield
McCoy, Archibald — Wardensville
Mitchell, O. F. — Franklin
Moyers, B. F. — Mathias
Reynolds, O. S. — Franklin
Sites, Charles J. — "
Veach, Lysle T. — Petersburg
Wilson, P. R. — Piedmont
Wolverton, J. H. — "
Wolverton, J. H., Jr. — "

PRESTON

Arnett, J. C. — Rowlesburg
Brown, Donald P. — Kingwood
Cashman, Harold H. — Hopemont
Davis, DelRoy R. — Kingwood
*Fortney, F. D. — Beckley
Johnson, W. P., Jr. — Arthurdale
Lehman, J. F. — Kingwood
McIntire, T. S. — "
Miller, B. B. — Eglon
Miller, H. C. — "
Moser, C. Y. — Kingwood
Salkin, David — San Fernando (Cal.)
Smith, C. E. — Terra Alta

Starkey, A. L. ..... Hopemont
*Watson, E. E. ..... Kingwood
White, S. R. ..... Bruceton Mills

RALEIGH

Ashton, D. C. ..... Beckley
Banks, F. L. ..... "
*Banks, M. C. ..... Raleigh
Batallion, A. L. ..... Ameagle
Bowles, A. G. ..... Beckley
Broaddus, R. G. ..... "
Chambers, R. W. ..... "
Coram, J. M. ..... "
Covey, W. C. ..... "
Covey, W. C., Jr. ..... Baltimore (Md.)
Cunningham, G. R. ..... Tams
*Cunningham, W. H. ..... Beckley
Daniel, D. D. ..... "
*Daniel, G. P. ..... Glen Daniel
Daniel, R. P. ..... Pemberton
Daue, E. O., Jr. ..... Beckley
Dupuy, Samuel S. ..... Scarbro
Edwards, Hugh S. ..... Beckley
Ford, S. A. ..... "
Garrett, T. F. ..... Sprague
*Godbey, John Q. ..... Glen Daniel
Gwinn, G. E. ..... Catawba (Va.)
Halloran, L. M. ..... Beckley
Harkleroad, F. S. ..... "
Harvey, Harold E. ..... "
Heagarty, John P. ..... Layland
Hedrick, E. H. ..... Beckley
Hedrick, G. C., Jr. ..... "
Hedrick, John A. ..... "
Hendricks, Esten J. ..... Lillybrook
Houser, L. G. ..... Beckley
*Johnson, G. W. ..... "
Joseph, Alfred ..... Montcoal
Kessel, Clark, ... Beckley
Lilly, Wallace B. ..... Beckley
Mays, W. C. ..... Stanaford
McKenzie, J. E. ..... Beckley
*Mitchell, R. C. ..... Sophia
*Moore, F. J. ..... Beckley
Moran, W. G., Jr. ..... Cranberry
Newman, J. W. ..... Pemberton
Newman, Ross E. ..... Beckley
Patterson, Wm. C. ..... Killarney
Peter, B. K. ..... Beckley
Pomputius, W. F. ..... Helen
Ralsten, M. M. ..... Beckley
Rardin, W. H. ..... "
Richmond, B. B. ..... Huntington
Richmond, W. Fred ..... Beckley
*Riley, W. M. ..... Whitby
Ruark, W. T. ..... Beckley
Sato, Sam I. ..... Slab Fork
Shrewsbury, L. E. ..... Beckley
Smith, C. A. ..... Raleigh
Smith, Meryleen ..... Rich Creek (Va.)
Tieche, A. U. ..... Beckley
Vaughn, P. E. ..... "
Vermillion, T. U. ..... "
Ward, Charles ..... Eccles
Whitlock, J. W. ..... Affinity
Willard, E. H. ..... Beckley
Wray, Everett B. ..... Stotesbury
*Wriston, Robert ..... Beckley

SUMMERS

*Cooper, O. O. ..... Feather Falls (Cal.)
Holmes, Albert W. ..... Hinton
Howard, C. L. ..... "
McNeer, B. W. ..... "
Pence, G. L. ..... "
Ritter, D. W. ..... "
Van Sant, W. L. ..... "

TAYLOR

Campbell, O. S. ..... Grafton
Haislip, Charles A. ..... "
Heironimus, T. W., Jr. ..... Grafton
Kimble, J. U. ..... "
Shafer, C. F. ..... "
Shanes, Herbert N. ..... "
Stout, R. D. ..... "
Stroud, C. G. ..... Flemington
Trippett, K. H. ..... Galloway
Warden, Paul P. ..... Grafton

WETZEL

Blum, E. C. ..... New Martinsville
Coffield, O. T. ..... " "
Dyer, A. M., Jr. ..... Pine Grove
Gordon, T. B. ..... New Martinsville
Hornbrook, Kent M. ..... " "
Miller, R. F. ..... Paden City
Picard, Robt. S. ..... Pine Grove
Pyles, John W. ..... New Martinsville
Skinner, J. M., Jr. ..... " "
Theiss, John O. ..... " "
Viggiano, M. A. ..... " "
Zinn, R. H. ..... Hundred

WYOMING

Biggart, J. F. ..... Mullens
Hatfield, R. C. ..... Oceana
Khorozian, K. G. ..... Pineville
Penn, F. H. ..... Mullens
Speed, Geo. W. ..... "
Steele, B. W. ..... "
Upchurch, C. T. ..... Kopperston
Wilkinson, D. D. ..... Wyco
Wilkinson, E. M. ..... Pineville
Wylie, Ward ..... Mullens
Zsoldos, F. J. ..... Glen Rogers

COUNTY SOCIETIES

BARBOUR-RANDOLPH-TUCKER

Dr. Roy Bird Cook, of Charleston, secretary of the state board of pharmacy and past president of the American Pharmaceutical Association, was the guest speaker at a joint meeting of pharmacists and doctors, held October 20 at the City Hall in Belington, sponsored by the Barbour-Randolph-Tucker Medical Society.

Dr. E. E. Myers, of Philippi, presided at the meeting, which was attended by thirty-five doctors, pharmacists, and visitors.

Doctor Cook presented a grab bag of subjects, medical and pharmaceutical, ranging from ancient medieval manuscripts to modern prescriptions, applying to each a tale appropriate to the chronological development of medicine and pharmacy. He placed especial emphasis on medicine and pharmacy in West Virginia, and stressed the great need for cooperation between the members of the two professions.

The speaker traced the history of both pharmacy and medicine, recalling that the state board of pharmacy was established by the legislature in 1881 and that the West Virginia State Medical Association was organized in 1867.

The first state board of health was created in 1895, and was supplanted by the public health council. The Council went out of existence June 1, 1949, and its duties were taken over by the state board of health.

Doctor Cook spoke briefly on the subject of socialized medicine and asked full cooperation between the two groups in the fight against compulsory health insurance.—Donald R. Roberts, Secretary.

* * * *

CABELL

Dr. Francis L. Coffey, of Huntington, was elected president of the Cabell County Medical Society at the regular monthly meeting held October 13 in the Fireside Room of the Frederick Hotel, in Huntington. Other officers were elected as follows: Vice president, J. R. Cook; secretary, James A. Heckman; treasurer, Frank M. Booth, Jr.; and member of the board of censors, L. B. Gang.

Drs. C. Stafford Clay, H. E. Beard, and Clarence H. Boso were elected delegates to the House of Delegates, and Drs. J. J. Brandabur, John E. Stone, and T. G. Folsom, alternates.

Dr. N. H. Dyer, state director of health, was the guest speaker on the scientific program which preceded the business meeting. His subject was, "Some of the Aspects of Public Health."

Mr. John Hall, of Huntington, discussed the community chest, and Dr. T. E. Hynson presented a paper on "The Treatment of Syphilis." The Red Cross blood bank program was approved by the Society with the proviso that such approval be contingent upon official approval of the project by the AMA Council on Blood Banks.

THE GEORGE WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

Announces

THE FIFTH ANNUAL SERIES OF INTENSIVE

POSTGRADUATE COURSES

(1)	Anesthesiology	February 27-March 3, 1950
(2)	Pediatrics	March 6-10, 1950
(3)	Internal Medicine	March 13-17, 1950
(4)	Surgical Physiology	March 20-24, 1950
(5)	Obstetrics and Gynecology	March 27-31, 1950
(6)	Psychiatry	April 3-7, 1950

For further details, write:

THE GEORGE WASHINGTON UNIVERSITY SCHOOL OF MEDICINE
Office of Director, Postgraduate Instruction
University Hospital
901 Twenty-third Street, N. W.
Washington 7, D. C.

Clinically approved

Today, there is a wealth of clinical evidence supporting the use of Meonine as a supplement to the protein-rich diet usually prescribed for liver damage associated with malnutrition, pregnancy, allergy, certain chemical poisons, and alcoholism.

Typical of this evidence is a Beams-Endicott paper*. The authors reported that a methionine supplement seemed to cause regeneration of the liver parenchyma, in cirrhotic patients, irrespective of the amount of protein and vitamins in the diet.

Complete bibliography on request. Meonine is supplied in 0.5 gram tablets. Wyeth, Philadelphia, Pa.

*Beams, A. J., and Endicott, E. T., Histologic changes in the livers of patients with cirrhosis treated with methionine, Gastroenterology 9:718-735 (Dec.) 1947.

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

MEONINE®

for liver damage

(dl-Methionine Wyeth)

Wyeth®

It Can Happen Here

Example of severe rickets in a sunny clime.

LEST WE FORGET—we who are of the vitamin D era—severe rickets is not yet eradicated, and moderate and mild rickets are still prevalent. Here is a white child, supposedly well fed, if judged by weight alone, a farm child apparently living out of doors a good deal. This boy was reared in a state having a latitude between 37° and 42°, where the average amount of fall and winter sunshine is *equal to that in the major portion of the United States*. And yet such stigmata of rickets as *genu varum* and the quadratic head are plain evidence that rickets does occur under these conditions.

How much more likely, then, that rickets will develop among city-bred children who live under a smokepall for a large part of each year. True, vitamin D is more or less routinely prescribed nowadays for infants. But is the antiricketic routinely administered in the home? Does the child refuse it? Is it given in some unstandardized form, purchased from a false sense of economy because the physician did not specify the kind?

A uniformly potent source of vitamin D such as Oleum Percomorphum, administered regularly in proper dosage, can do more than protect against the gross visible deformities of rickets. It may prevent hidden but nonetheless serious malformations of the chest and the pelvis and will aid in promoting good dentition. Because the dosage is measured in *drops*, Oleum Percomorphum is well taken and well tolerated by infants and growing children.

OLEUM PERCOMORPHUM WITH OTHER FISH-LIVER OILS AND VIOSTEROL

Potency, 60,000 vitamin A units and 8,500 vitamin D units per gram. Supplied in 10 cc. and 50 cc. bottles; and as capsules in bottles containing 50 and 250.

MEAD JOHNSON & COMPANY, EVANSVILLE, INDIANA, U.S.A.

Please enclose professional card when requesting samples of Mead Johnson products to co-operate in preventing their reaching unauthorized persons

Merry Christmas and a Happy New Year

THE WEST VIRGINIA Medical Journal

Vol. 45 No. 12 DECEMBER, 1949 Per Year, $ Single Copy, 50

COLLEGE OF PHYSICIANS LIBRARY DEC 14 1949 OF PHILADELPHIA

Published Monthly By
THE WEST VIRGINIA STATE MEDICAL ASSOCIATION
Box 1031 (302 Atlas Bldg.), Charleston 24, W. Va.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

CONTENTS

Secretory Otitis Media
By Sobisca S. Hall, M. D.

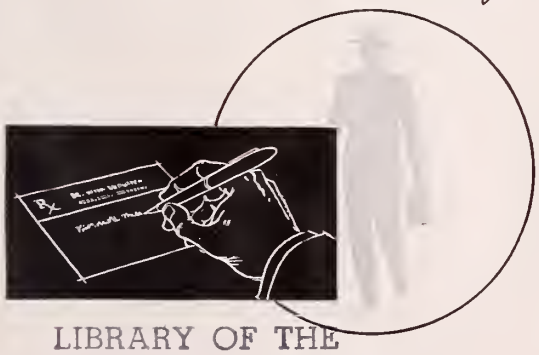
Epigastric Hernia
By Walter R. Wilkinson, M. D.

A Simplified Test for the Low Sodium Diet
By Max Koenigsburg, M. D.

The Application of Thoracic Surgery
By Maurice G. Buckles, M. D., F. A. C. S.

ANNUAL ROSTER INDEX

By the touch of your pen



a complete system of distribution is set in orderly motion.

Many thousands of items are assembled in a near-by wholesale drug house convenient to every retail pharmacist. Your patients' particular requirements await only the signal of your prescription.

Your Lilly medical service representative's attention is given to every phase of this distributing system. This makes certain that quality pharmaceuticals are quickly supplied whenever you prescribe Lilly products.

LIBRARY OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

Lilly

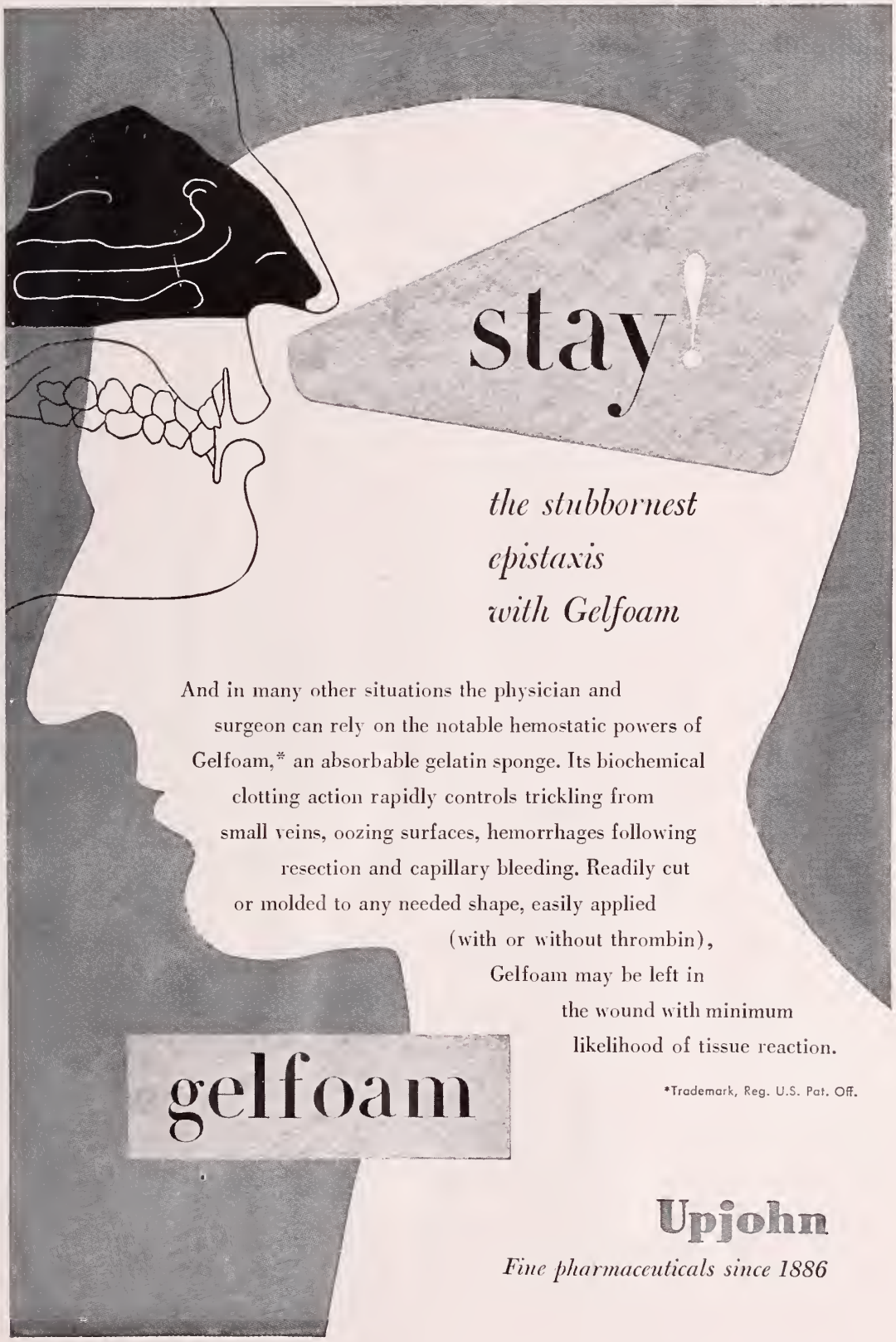
QUALITY
RESEARCH
ETHICS

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U. S. A.

ADRENALIN®

most valuable

PARKE, DAVIS & COMPANY


stay!
the stubbornest
epistaxis
with Gelfoam
And in many other situations the physician and surgeon can rely on the notable hemostatic powers of Gelfoam,* an absorbable gelatin sponge. Its biochemical clotting action rapidly controls trickling from small veins, oozing surfaces, hemorrhages following resection and capillary bleeding. Readily cut or molded to any needed shape, easily applied (with or without thrombin), Gelfoam may be left in the wound with minimum likelihood of tissue reaction.
*Trademark, Reg. U.S. Pat. Off.
gelfoam
Upjohn
Fine pharmaceuticals since 1886

Flexible Formula

FOR AN INDIVIDUALIST

PHYSICIANS concerned with infant feeding have found that the exceptional *flexibility-of-use* offered by Dextri-Maltose* is an important advantage in adapting formulas to the individual requirements of the baby.

By the inclusion of Dextri-Maltose in appropriate amount, the caloric value and carbohydrate content of a formula can easily be adjusted to the infant's special needs.

Since the physician has 5 forms of Dextri-Maltose available, an individual infant's formula may be changed according to various clinical or physiologic indications without disturbance of his routine.

Being a mixture of carbohydrates, Dextri-Maltose offers special qualities of digestibility and slowness of absorption. Hence it is an ideal carbohydrate for use in diarrhea and other gastrointestinal disturbances.

Dextri-Maltose dissolves rapidly in water or milk. It can be used in *your* preferred method of formula preparation. *T.M. Reg. U.S. Pat. Off.

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA

This Book is due on the last date stamped below. **No further preliminary notice will be sent.** Requests for renewals must be made on or before the date of expiration.

DUE	RETURNED
JAN 3 - 1951	JAN 2 - 1950
SEP 19 1952	SEP 12 1952
JUN 27 1958	

A fine of twenty-five cents will be charged for each week or fraction of a week the book is retained without the Library's authorization.